UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

JUL 1 9 2013

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Robert Mancini
Refining Business Unit Project Manager
Chevron USA Inc.
1200 State Street
Perth Amboy, New Jersey 08861

Mr. Kevin McMahon
Site Operation Manager
Buckeye Perth Amboy Terminal LLC
400 Maurer Road
Perth Amboy, New Jersey 08861

Re: Notice of Issuance of Final Permit Renewal and Permit Modification I Decision
Chevron USA, Inc. and Buckeye Perth Amboy Terminal LLC
EPA ID No. NJD081982902

Dear Mr. Mancini and Mr. McMahon:

Pursuant to authority granted by section 3005 of the Resource Conservation and Recovery Act ("RCRA"), as amended by the Hazardous and Solid Waste Amendments of 1984 ("HSWA"), you are hereby served with this Notice of Issuance of a Final HSWA Permit Renewal and Permit Modification I (hereinafter referred to as "final HSWA permit", or "final permit") decision for the above referenced facility.

Please read the final permit carefully, since it contains changes from the draft permit. Comments that were submitted in a timely manner during the public comment period have been considered in making this final permit decision. A copy of a Responsiveness Summary is enclosed which contains EPA's responses to comments submitted during the public comment period on the draft permit.

EPA will not subject the changes from the draft to the final HSWA permit decision to another public review. However, these changes may be challenged under the Consolidated Permit Regulations, codified at 40 C.F.R. Part 124 (45 FR 33405) which apply to the EPA processing of this final permit modification. Specifically, 40 C.F.R. § 124.19, establishes procedures for administrative appeal of final RCRA decisions. Any person who filed comments on the draft

permit may petition the Environmental Appeals Board in Washington, D.C. to review any conditions of the final permit decision. Any person who failed to file comments on the draft permit renewal/permit modification may petition for administrative review only to the extent of the changes from the draft to the final permit. Any petition for review must be made by September 3, 2013, the date the permit otherwise becomes effective, as provided by 40 C.F.R. § 124.19. See also 40 C.F.R. § 124.20.

The petition for review shall include a statement of the reasons supporting that review, including:

(1) A demonstration that any issues being raised were raised during the public comment period and the public hearing, as required, or, if the appellant did not comment during the public comment period, or at the public hearing, a demonstration that the issues being raised relate to the changes between the draft and final permit modification provisions; and when appropriate,

(2) A showing that the contested portion of the permit modification is based on:

(a) A finding of fact or conclusion of law which is clearly erroneous; or

(b) An exercise of discretion or an important policy consideration which the Environmental Appeals Board should, in its discretion, review.

All requests for administrative review, if sent via the U.S. Postal Service (except by Express Mail), must be addressed to:

Clerk of the Board
U. S. Environmental Protection Agency
Environmental Appeals Board
1200 Pennsylvania Avenue, NW
Mail Code: 1103M
Washington, D.C. 20460-0001

Or, if delivered to the Board by hand or courier, including Federal Express, UPS, and U.S. Postal Service Express Mail, must be delivered to:

Clerk of the Board
U.S. Environmental Protection Agency
Environmental Appeals Board
1201 Constitution Avenue, NW
U. S. EPA East Building, Room 3332
Washington, D.C. 20004

A copy of the request should be sent to:

Mr. John Filippelli, Director
Clean Air and Sustainability Division
U.S. Environmental Protection Agency
Region 2
290 Broadway, 25th Floor
New York, New York 10007-1866
(212) 637-3736

Electronic filing of a request for review is also permitted. See the Environmental Appeals Board website at www.epa.gov/eab for appropriate information on electronic filing and EAB procedures and practices.

This final permit, a copy of which is enclosed, becomes effective in its entirety on the date indicated on the second page of the Notice of Issuance, unless any interested party files a petition for review to the Environmental Appeals Board by September 3, 2013. In the event that administrative appeal is sought, the final permit decision will become effective:

(i) To the extent the Environmental Appeals Board issues notice to the parties that review has been denied;

(ii) When the Environmental Appeals Board issues a decision on the merits of the appeal and the decision does not include a remand of the proceedings;

(iii) Upon the completion of remand proceedings if the proceedings are remanded unless the Environmental Appeals Board's remand order specifically provides that appeal of the remand decision will be required to exhaust administrative remedies.

Once it has become effective, the final permit decision will be final Agency action. Under Section 7006 (b) of RCRA, judicial review of this final action is available by the filing of a petition for review in the United States Court of Appeals for the appropriate circuit within 90 days of the date of this permit modification's final issuance. The 90-day judicial review period is available only when the administrative appeal procedures have been exhausted. This final action shall not be subject to later judicial review in civil or criminal proceedings for enforcement.

Please be advised that violation of any of the conditions of the enclosed permit modification may subject you and your facility to the civil and criminal penalties provided for in Section 3008 of RCRA.

Your cooperation with the RCRA program is appreciated.

Sincerely yours,

for John Filippelli, Director
Clean Air and Sustainability Division

cc: Mr. Steve Maybury, Chief, Bureau of Case Management, NJDEP

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

NOTICE OF ISSUANCE
of
Final Hazardous and Solid Waste Amendment (HSWA) Permit Renewal and Permit Modification I
Chevron-Buckeye

Perth Amboy, New Jersey
EPA ID# NJD081982902

The Director of the Clean Air and Sustainability Division of the United States Environmental Protection Agency ("EPA"), Region 2, has decided to issue a permit under the authority of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, Subtitle C, and the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. §§ 6901 et seq. (collectively referred to as "RCRA"), and EPA regulations promulgated pursuant thereto, to the former Chevron facility now owned in part by Chevron USA, Inc. (Chevron) and in part by Buckeye Perth Amboy Terminal LLC (Buckeye), ("Permittee"), located in Perth Amboy, New Jersey. This HSWA Permit renewal will supersede the original 1994 HSWA permit, and will require Permittee to perform remedial activities to clean up onsite contamination through application of appropriate remedies to treat contaminated soil and groundwater. Among the selected remedies are In-Situ Chemical Oxidation (ISCO), Excavation, and Ex-Situ Stabilization. The proposed permit renewal will also provide for permanent onsite encapsulation of some of the remedial waste generated during the clean-up process in a Corrective Action Management Unit (CAMU).

Enclosed is a copy of the final RCRA permit. The public notice was issued and invited comments from interested citizens, and announced a public meeting which was held on January 15, 2013. The public comment period lasted from December 28, 2012 through March 5, 2013. Only the Permittee and NJDEP submitted comments on the draft permit. The EPA Responsiveness Summary to these comments is attached to the final permit.

Anyone wishing to appeal the Director's decision should refer to the procedures set forth in 40 C.F.R. § 124.19. That section states that within thirty (30) days after the date of the service of this Notice, any person who filed comments on the draft RCRA permit may petition the Environmental Appeals Board to review any condition of the permit decision. Any person who failed to comment on the draft RCRA permit may petition for administrative review only to the extent of the changes from the draft to the final permit decision. Furthermore, that section states that a person seeking appeal must exhaust administrative appeal procedures prior to invoking judicial review.

The thirty (30) days period to request review of this final permit decision shall begin with the date of the service of this Notice. (Note, for those parties receiving this Notice by mail, three (3) additional days will be added to the prescribed thirty (30) day period, as provided in 40 C.F.R. § 124.20(d).

JUL 19 2013

John Filippelli
Director
Clean Air and Sustainability Division
United States Environmental Protection Agency
Region 2

Date Notice Served

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

Final Hazardous and Solid Waste Amendments ("HSWA") Permit

Permittee: **Chevron USA, Inc, and Buckeye Perth Amboy Terminal LLC, Perth Amboy, New Jersey**

Facility Location: **1200 State Street, Perth Amboy, New Jersey**

EPA Facility I.D. Number: NJD081982902

Effective Date: September 3, 2013

Expiration Date: September 3, 2023

This permit is issued by the United States Environmental Protection Agency ("EPA") to Chevron USA, Inc. and Buckeye Perth Amboy Terminal LLC (jointly known as the "Permittee"), under the authority of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 (RCRA), Subtitle C, and the Hazardous and Solid Waste Amendments of 1984 ("HSWA"), 42 U.S.C. § 6901 et seq. (referred to collectively as "RCRA"), and EPA regulations promulgated thereunder. This RCRA corrective action permit will require Permittee to perform remedial activities to clean up onsite contamination through application of appropriate remedies to treat contaminated soil and groundwater. Among the proposed selected remedies are In-Situ Chemical Oxidation (ISCO), Excavation, and Ex-Situ Stabilization. The proposed permit renewal will also provide for permanent onsite encapsulation of some of the remedial waste generated during the clean-up process in a Corrective Action Management Unit (CAMU). In accordance with this permit, the Permittee is required to:

(1) implement corrective measures for specifically identified SWMUs and AOCs, or portions thereof, at the facility;

(2) construct and operate of an on-site CAMU in the Main Yard for the disposal of remediation wastes from the implementation of corrective action remedies;

(3) determine that no further action (NFA) is required for specific SWMUs and AOCs, or portions thereof, at the facility: and

(4) Comply with other applicable statutory or regulatory requirements imposed pursuant to RCRA.

The Permittee must comply with all the terms and conditions of this permit. This permit consists of the conditions contained in Modules I through IV, including the Attachments A through M to the permit, and the applicable regulations contained in 40 CFR Parts 124, 260 through 265, 268, 270 and 279. Applicable regulations are those which are in effect on the date of issuance of this permit. A permit may be modified, pursuant to 40 CFR § 270.41(a)(3) and 40 CFR § 270.32(c), however, to incorporate new regulations. All documents referred to in the permit are incorporated into the permit by reference.

The permit is effective as of 09/03/2013 and shall remain in effect until 09/03/2023, unless revoked and reissued, modified, or terminated in accordance with 40 CFR §§ 270.41, 270.42, or 270.43, or continued in accordance with 40 CFR § 270.51(a).

JUL 19 2013

John Filippelli
Director
Clean Air and Sustainability Division
United States Environmental Protection Agency
Region 2

Date

RESPONSIVENESS SUMMARY

Final HSWA Permit Renewal for
Chevron USA, Inc – Buckeye Perth Amboy Terminal LLC
Perth Amboy, New Jersey
EPA I.D. Number NJD081982902

This "Responsiveness Summary" has been prepared pursuant to 40 Code of Federal Register § 124.17. It addresses the comments submitted to EPA during the public comment period regarding the draft Resource Conservation and Recovery Act (RCRA)/Hazardous and Solid Waste Amendments (HSWA) Permit prepared for Chevron USA, Inc – Buckeye Perth Amboy Terminal LLC ("Chevron-Buckeye") regarding its Perth Amboy, NJ facility.

Pursuant to 40 C.F.R. § 124.10, EPA issued a Public Notice on December 28, 2012 indicating that EPA had made a tentative determination to renew Chevron-Buckeye's RCRA/HSWA permit, subject to public notice and comment. The Public Notice announced a sixty (60) day public comment period during which the draft Permit prepared for Chevron-Buckeye's Perth Amboy, NJ facility was available for inspection. The Notice further invited comments from interested citizens, several of whom asked a few questions at the public meeting which was held on January 15, 2013. The public comment period lasted from December 28, 2012 through March 5, 2013.

Chevron-Buckeye and the New Jersey Department of Environmental Protection (NJDEP) were the only two parties that have submitted written comments concerning the draft Permit, numbering 38 and 28 comments, respectively. This Responsiveness Summary sets forth the comments as submitted by Chevron-Buckeye and NJDEP during the public comment period, followed by EPA's responses. The order of the comments and responses correspond to the Modules and then the conditions and page numbers within each Module.

A Responses to Chevron-Buckeye comments

1. General Comment

Chevron-Buckeye Comment: General Comment –The Draft Permit is issued to both Chevron USA, Inc. ("Chevron") and Buckeye Perth Amboy Terminal, LLC ("Buckeye") as co-permittees of the facility. In connection with the negotiation of the sale of part of the facility to Buckeye, both Chevron and Buckeye had anticipated that the Permit would

be issued solely to Chevron. Neither Chevron nor Buckeye has any operating RCRA regulated units which would require a RCRA/HSWA operational permit at the site. Rather, the permit requested by Chevron was solely for the implementation of RCRA corrective action requirements associated with Chevron's former ownership and/or operations at the site. Chevron has agreed to implement the corrective measures for the Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) identified in the Draft Permit. Chevron would be the "operator" for the purpose of corrective action at the facility. Buckeye has not applied for the Draft Permit. Therefore, Chevron requests that the Permit clarify and distinguish that Chevron is responsible for implementing the RCRA corrective action provisions for those SWMUs and AOCs listed in the Permit, and Buckeye is responsible for compliance with Permit requirements (if any) for the petroleum facility operations.

As background, until July 27, 2012, Chevron owned and operated a petroleum terminal and asphalt refinery which covered most of the site. As shown on the Figure 1, attached, Chevron's former petroleum terminal and refinery had been divided in 4 areas known as the East Yard, Central Yard, Main Yard and North Field Extension. On July 27, 2012 Chevron sold all of the petroleum operations at the site and much of the real estate to Buckeye. As part of the sale, Buckeye purchased all of the property in the East Yard and Central Yard and most of the Main Yard. Chevron retains ownership of the northern portion of the Main Yard and the North Field Extension. The total facility is approximately 278 acres. Buckeye now owns approximately 232 acres and Chevron retains approximately 46 acres. The same change should be made in the Statement of Basis on page 3 of 33.

As of the sale, Buckeye owns and operates all of the active petroleum operations at the site. Chevron understands that Buckeye will continue to operate the petroleum terminal under their own regulatory permits or approvals, as may be required, and that Buckeye will manage hazardous waste generated from their operations outside of the provisions of this Permit under their own RCRA Generator ID Number. However, Chevron will manage the remediation wastes generated from the corrective actions under this Permit.

The part of the site purchased by Buckeye contains solid waste management units (SWMUs) and areas of concern (AOCs) that Chevron is remediating under its RCRA Corrective Action Permit. In addition to Chevron remaining the owner of a portion of the overall site, Chevron will also remain the operator (for remediation purposes only) of the Buckeye owned portion of the Site where SWMUs/AOCs are located that Chevron is remediating.

In summary, Chevron requests that the Permit be clarified to state that Chevron will be responsible for implementation of the corrective action requirements contained in Module III for the SWMUs and AOCs identified in the CMS Report. To the extent that any of the Permit requirements relate to the active commercial petroleum operations being undertaken by Buckeye, those requirements will be addressed by Buckeye.

Additionally, the Permit should be clarified to allow Chevron or Buckeye to address newly discovered releases, if any, under the oversight of NJDEP or a Licensed Site Remediation Professional for such releases which occur or which may be encountered that are not currently listed as SWMUs or AOCs in the Permit.

EPA's Response: EPA acknowledges that on July 27, 2012, Chevron sold a large portion of the property to Buckeye, while still retaining ownership of the northern portion of the Main Yard, as well as the full responsibility for the RCRA cleanup activities at all SWMUs and AOCs at the entire former Chevron site. SWMUs and AOCs subject to HSWA corrective action are located throughout the property owned by Chevron and the property owned by Buckeye. The detail of the ownership division of the property between Chevron and Buckeye is delineated in the revised Part-A Application submitted to EPA. As a result, the former Chevron facility is now effectively co-owned and operated by both Chevron and Buckeye. For the purpose of the cleanup of the facility which was formerly exclusively owned Chevron, the renewed HSWA corrective action permit will be issued to address cleanup of all SWMUs and AOCs existing at the former Chevron site which is now currently divided with portions owned by both Chevron and Buckeye. Consequently, Chevron and Buckeye, as owners of portions of the facility property and co-permittees, are liable for the permit compliance.

EPA has modified the language in Module III, and Statement of Basis, in addressing Chevron's request for clarification that Chevron will transfer the facility property to Buckeye in stages and the fact that as between the two parties, Chevron will continue to be responsible for implementation of the corrective measures under the renewal permit, specifically, for the implementation of the corrective action requirements contained in Module III for the SWMUs and AOCs.

Chevron-Buckeye has made a request that investigation and cleanup of newly identified SWMUs, and AOCs should be under the oversight of NJDEP. Based on discussions between EPA and NJDEP, it has been agreed in principle that the newly discovered releases, newly discovered SWMUs, AOCs, and Potential AOCs (PAOCs) will be

investigated and cleaned up in accordance with provisions of NJDEP's Site Remediation Reform Act (SRRA) and Industrial Site Recovery Act (ISRA) which are consistent with EPA's HSWA requirements. Although NJDEP will be the lead in dealing with these newly identified releases, EPA would be copied on all notification and reporting, and be kept fully abreast of the progress of the clean-up process of the newly identified SWMUs, AOCs and PAOCs. As a result, EPA has made the changes to Module III and Statement of Basis to address this requested modification. The intent of the clause is to avoid duplicated efforts in order to meet both USEPA and NJDEP requirements, while addressing the newly identified SWMUs and AOCs. EPA will also record its approval of documentation concerning the cleanup(s).

2. **Module I, Section N**

Chevron-Buckeye Comment: Module I, Section N – The Draft Permit provides that USEPA and NJDEP will coordinate with each other during the implementation of the permit and that standards and cleanup levels will be consistent with each agency's requirements. Given that the cleanup of the facility is being administered by the EPA as the lead agency under the EPA/NJDEP 1992 RCRA Corrective Action Coordination Agreement, Chevron requests that the permit language be clarified to reflect that EPA is the lead agency for the cleanup of the SWMUs and AOCS and the cleanup of these units will be governed by the standards and provisions contained in this Permit.

Based on prior meetings with both NJDEP and EPA, it is our understanding that by issuance of this Permit both agencies agree with the remediation approach and standards for the SWMUs, AOCs and other areas identified in the CMS. It is Chevron's understanding that by issuance of the permit both agencies concur that the proposed remediation is consistent and sufficient to address both RCRA corrective action requirements and NJDEP remediation requirements. Chevron believes that clarification of this issue is needed to ensure finality of cleanup decisions. The current language in this Permit paragraph should be replaced with: "The cleanup of the facility is being administered by the EPA as the lead agency since the State is not authorized to implement the RCRA corrective action program. By issuance of this Permit, both agencies (NJDEP and EPA), agree with the remediation approach and standards for the SWMUs, AOCs and other areas identified in the CMS Report (Appendix C) and associated correspondence. Both agencies concur that the proposed remediation is consistent and sufficient to address both RCRA corrective action requirements and NJDEP remediation requirements."

EPA's Response: EPA has modified the language of the section to address the requested clarification.

Upon the issuance of the HSWA permit, EPA and NJDEP will coordinate to ensure, by jointly reviewing and approving documents, that corrective action activities to be undertaken by Chevron meet not only the EPA's but also the NJDEP's requirements. The EPA will be lead in that the NJDEP will provide their comments and concerns to the EPA and subsequently, the EPA will transmit one single letter incorporating EPA's and NJDEP's comments or concerns to Chevron. Any conflicts between the Agencies will be resolved prior to communicating with Chevron. It is expected that standards promulgated by EPA and NJDEP for action levels and cleanup levels will be consistent. However, any differences in standards will be resolved prior to communication with Chevron. The applied standards will be protective of human health and the environment.

3. **Module II, Section A – Facility Description.**

Chevron-Buckeye Comment: Module II, Section A – Facility Description – For clarification, the Effluent Treatment Plant (ETP) was included in the 2012 sale to Buckeye and is now owned by Buckeye (paragraph 3, line 12). The Statement of Basis (page 3 of 33) should also be revised to reflect this change.

EPA's Response: The requested clarification of "now owned by Buckeye" has been added to the final permit and the Statement of Basis.

4. **Module II, Section C**

Chevron-Buckeye Comment: Module II, Section C – Prohibition on Receipt of Off-site Wastes - The following text should be added to the sentence: "except for remediation wastes related to sources at the site." Chevron should be able to use the CAMU for remediation waste associated with SWMUs or AOCs at the facility, regardless of if they are currently on-site or off-site.

EPA's Response: To address Chevron-Buckeye's concern for its ability to treat the on-site waste that may have possibly migrated offsite, EPA has expanded the sentence to include: "except for remediation wastes related to sources at the site."

5. **Module II, Section N - Closure and Post-Closure**

Chevron-Buckeye Comment: Module II, Section N - Closure and Post-Closure – This section and Section O (Page II-14) of the permit discusses closure and appears to be associated with the closure of RCRA regulated units. This section should be removed as closure and post-closure requirements for RCRA regulated units are overseen by NJDEP under New Jersey's delegated RCRA base program. In the event that EPA does not agree to remove this Section the Permit should then reference NJDEP as the delegated lead agency.

EPA's Response: EPA has deleted the provision, as closure and post-closure requirements for RCRA regulated units are overseen by NJDEP under New Jersey's delegated RCRA base program.

6. **Module II, Section O - Cost Estimate for Facility Closure and P. Financial Assurance for Facility Closure**

Chevron-Buckeye Comment: Module II, Section O - Cost Estimate for Facility Closure and P. Financial Assurance for Facility Closure - All of Section O and P should be removed from the Permit as: 1) EPA is not the lead agency on closure at the site (the NJDEP is authorized to implement this program in lieu of EPA); and 2) all of the RCRA regulated units at the site are already closed under NJDEP oversight (there are no units needing closure). See Comment 5, above.

EPA's Response: EPA has deleted the provision, as closure and post-closure requirements for RCRA regulated units are overseen by NJDEP under New Jersey's delegated RCRA base program.

7. **Module III, Section A – Summary of Corrective Action Process**

Chevron-Buckeye Comment: Module III, Section A – Summary of Corrective Action Process – On page III-2, it is stated "The public will have an opportunity to comment on the CMI conditions and schedules set forth in the CMI Work Plan during a permit modification for remedy selection or when the permit is modified to incorporate the CMI Workplan, or a permit renewal." Similar language is mentioned elsewhere in the Permit. When this permit is issued final it should be clarified that these conditions have been met

for the corrective actions proposed for the SWMUs and AOCs identified in the permit. A permit modification will not be required for a CMI Workplan for those corrective measures approved in this permit. The Permit should allow Chevron to implement the corrective measures approved under this permit renewal without additional public comment or the need for the review of CMI workplans by the agency.

Several of the corrective measures proposed in the CMS require other types of permits from NJDEP (such as NJDEP approvals for the injection of reagents associated with in-situ chemical oxidation). Chevron will prepare the appropriate workplans to obtain these NJDEP approvals for corrective measure implementation, as applicable. However, the requirement to submit CMI Workplans and have those workplans be subject to a formal RCRA permit modification process is not required under current EPA regulations. It would be time consuming, overly burdensome and duplicative considering that EPA has approved the corrective measures in this Permit renewal.

EPA's Response: It has been a standard procedure of the EPA's public participation process that after issuing the final permit, and upon approval of the CMI workplan, which details specifics of how and when the work will be conducted, EPA will inform those interested parties on the mailing list of any important progress of the cleanup process.

The sentence "The public will have an opportunity to comment on the CMI conditions and schedules set forth in the CMI Work Plan during a permit modification for remedy selection or when the permit is modified to incorporate the CMI Workplan, or a permit renewal," has been replaced with "EPA will continue to keep the public, including those interested parties on the mailing list, generated at the public meeting, abreast of all important progress of the cleanup process."

8. **Module III, Section B.2. Specific Corrective Measures - SWMUs 8 and 10**

Chevron-Buckeye Comment: Module III, Section B.2. - Specific Corrective Measures - SWMU 8 and 10 – for clarification the word "Stabilization" should be added following "geochemical" with respect to arsenic impacted groundwater remediation. The same change should be made to the Statement of Basis on pages 10 and 11 of 33.

EPA's Response: EPA has made the requested modification.

9. **Module III, Section B.2. Specific Corrective Measures - SWMU 10**

Chevron-Buckeye Comment: Module III, Section B.2. - Specific Corrective Measures SWMU 10 – Item 1) should be revised to state "excavation, ex-situ stabilization and disposal in CAMU for TCLP lead levels >5 mg/l and TEL/TOL concentrations >2 mg/kg in soil." In Chevron's CMS, both TCLP lead and TEL/TOL lead contaminated soils are proposed to be disposed of in the CAMU. The same change should be made to the Statement of Basis on page 11 of 33.

EPA's Response: EPA has made the requested modification.

10. **Module III, Section B.2. Specific Corrective Measures - SWMU 11A**

Chevron-Buckeye Comment: Module III, Section B.2. - Specific Corrective Measures - SWMU 11A – Item 2) should be revised to state "excavation, ex-situ stabilization and disposal in CAMU for TEL concentrations >2 mg/kg in soil." In Chevron's CMS, both TCLP lead and TEL/TOL lead contaminated soils are proposed to be disposed of in the CAMU. Same change should be made in the Statement of Basis on page 11 of 33.

EPA's Response: EPA has made the requested modification.

11. **Module III, Section B.2. Specific Corrective Measures - SWMU 12**

Chevron-Buckeye Comment: Module III, Section B.2. - Specific Corrective Measures - SWMU 12 – Item 1) should be revised to state "excavation, ex-situ stabilization and disposal in CAMU for TEL concentrations >2 mg/kg in soil." In Chevron's CMS, both TCLP lead and TEL/TOL lead contaminated soils are proposed to be disposed of in the CAMU. Same change should be made in the Statement of Basis on page 11 of 33.

EPA's Response: EPA has made the requested modification.

12. **Module III, Section B.2. Specific Corrective Measures - SWMU 14**

Chevron-Buckeye Comment: Module III Section B.2. - Specific Corrective Measures - SWMU 14 – For clarification purposes the last sentence should state "NFA is proposed for both soil and groundwater and is granted under this permit." This clarifies that no other administrative steps are necessary to have this area declared NFA. The final permit should document the NFA. Same change should be made in the Statement of Basis on page 12 of 33.

EPA's Response: EPA has made the requested modification.

13. **Module III, Section B.2. Specific Corrective Measures - SWMU 17**

Chevron-Buckeye Comment: Module III, Section B.2. Specific Corrective Measures - SWMU 17 – Item 2) should be revised to state "excavation, ex-situ stabilization and disposal in CAMU for lead in soil and TEL/TOL concentrations >2 mg/kg in soil." In Chevron's CMS, both TCLP lead and TEL/TOL lead contaminated soils are proposed to be disposed of in the CAMU. Same change should be made in the Statement of Basis on page 12 of 33.

EPA's Response: EPA has made the requested modification.

14. **Module III, Section B.2. - Specific Corrective Measures - SWMU 18**

Chevron-Buckeye Comment: Module III, Section B.2. - Specific Corrective Measures - SWMU 18 – Item 2) should be revised to state "in-situ stabilization for lead in soil and file a deed notice." Also add the following to 4) "supplemented by enhanced bioremediation, if necessary," Same change should be made in the Statement of Basis on page 12 of 33.

EPA's Response: EPA has made the proposed modification to the item 2), and has made the requested modification with regard to the item 4).

15. **Module III, Section B.2. - Specific Corrective Measures - SWMU 22**

Chevron-Buckeye Comment: Module III, Section B.2. - Specific Corrective Measures - SWMU 22 – Item 2) should be revised to read "filing a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg in soil." Same change should be made in the Statement of Basis on page 13 of 33.

EPA's Response: EPA has made the requested modification.

16. **Module III, Section B.2. - Specific Corrective Measures - SWMU 41**

Chevron-Buckeye Comment: Module III, Section B.2. - Specific Corrective Measures - SWMU 41 – The corrective measures should be revised to remove items 2) and 3) and include "ISS for lead in soil, deed notice for BAP <10 mg/kg and >0.66 mg/kg, and a cap for arsenic in soil >20 mg/kg." Same change should be made in the Statement of Basis on page 17 of 33.

EPA's Response: EPA has made the requested modification.

17. **Module III, Section B.2. - Specific Corrective Measures - SWMU 44**

Chevron-Buckeye Comment: Module III, Section B.2. - Specific Corrective Measures - SWMU 44 – For clarification purposes the last sentence should state "NFA proposed for groundwater and is granted by EPA under this permit." This clarifies that no other administrative steps are necessary to have this area declared NFA. The final permit should document these as being NFA. Same change should be made in the Statement of Basis on page 18 of 33.

EPA's Response: EPA has made the requested modification.

18. **Module III, Section B.2. - Specific Corrective Measures - SWMU 51**

Chevron-Buckeye Comment: Module III, Section B.2. - Specific Corrective Measures - SWMU 51 – the last sentence should be revised to state "NFA is proposed for groundwater and is granted by EPA under this permit. Further evaluation is recommended for soils." This clarifies that no other administrative steps are necessary to have this area declared NFA for groundwater. The final permit should document the NFA. Same change should be made in the Statement of Basis on page 19 of 33.

EPA's Response: EPA has made the requested modification.

19. Module III, Section B.2. - Specific Corrective Measures - AOC No. 1

Chevron-Buckeye Comment: Module III, Section B.2. - Specific Corrective Measures - AOC No. 1 – As currently written the description for this AOC ends with the statement "Additional sampling and analysis is necessary to determine whether NFA is achieved." If it is determined that remediation is warranted based on the additional sampling, Chevron recommends that the following language be added to this paragraph of the Permit to expedite the remediation of this AOC: "If additional remediation is needed for this AOC the permittee will use any appropriate remedial methods approved in this permit for other parts of the site to achieve the cleanup levels." Same change should be made in the Statement of Basis on page 20 of 33.

EPA's Response: EPA has made the requested modification.

20. Module III, Section B.2. - Specific Corrective Measures - AOC No. 3

Chevron-Buckeye Comment: Module III, Section B.2. - Specific Corrective Measures - AOC No. 3 – As currently written the description for this AOC ends with the statement "Additional sampling and analysis is necessary to determine whether NFA is achieved." If it is determined that remediation is warranted based on the additional sampling, Chevron recommends that the following language be added to this paragraph of the Permit to expedite the remediation of this AOC: "If additional remediation is needed for this AOC the permittee will use any appropriate remedial methods approved in this permit for other parts of the site to achieve the cleanup levels." Same change should be made in the Statement of Basis on page 20 of 33.

EPA's Response: EPA has made the requested modification.

21. Module III, Section B.2. - Specific Corrective Measures - AOC 29

Chevron-Buckeye Comment: Module III, Section B.2. - Specific Corrective Measures - AOC 29 – Item 1) should be revised to state "excavation, ex-situ stabilization and disposal in the CAMU for BAP concentrations >10 mg/kg in soil." Same change should be made in the Statement of Basis on page 25 of 33.

EPA's Response: EPA has added the "Ex-situ stabilization" to Item 1) and to the Statement of Basis, as requested.

22. Module III, Section B.2. - Specific Corrective Measures - AOC 30

Chevron-Buckeye Comment: Module III, Section B.2. - Specific Corrective Measures - AOC 30 – The last sentence should state "NFA is proposed for both soil and groundwater and is granted under this permit." This clarifies that no other administrative steps are necessary to have this area declared NFA. The final permit should document the NFA. Same change should be made in the Statement of Basis on page 25 of 33.

EPA's Response: EPA has made the requested modification.

23. Module III, Section B.2. - Specific Corrective Measures - AOC 35

Chevron-Buckeye Comment: Module III, Section B.2. - Specific Corrective Measures - AOC 35 – Corrective measure 2) should be revised to state "NFA is proposed for groundwater and is granted by EPA under this permit. Further evaluation is recommended for soils." This clarifies that no other administrative steps are necessary to have this area declared NFA for groundwater. The final permit should document the NFA. Same change should be made in the Statement of Basis on page 26 of 33.

EPA's Response: EPA has made the requested modification.

24. Module III, Section B.2. - Specific Corrective Measures - AOC 36

Chevron-Buckeye Comment: Module III, Section B.2. - Specific Corrective Measures - AOC 36 – revise item 1) to read "enhanced in-situ bioremediation including bioaugmentation for 1,1-DCE and TCE greater than 100 ug/L in on-site groundwater." This clarifies that Chevron's CMS proposed the enhanced bioremediation for 1,1-DCE and TCE greater than 100 ug/L in groundwater. Same change should be made in the Statement of Basis on page 26 of 33.

EPA's Response: EPA has made the requested modification.

25. Module III, Section B.2. - Specific Corrective Measures - AOCs 51, 52 and 53

Chevron-Buckeye Comment: Module III, Section B.2. - Specific Corrective Measures - AOCs 51, 52 and 53 – These three EPA newly designated AOCs are made up of Woodbridge Creek, Spa Spring Creek and the Arthur Kill. Chevron agreed to investigate these three surface water bodies under the RCRA Facility Investigation (RFI). Significant investigation has already been conducted including sampling of both surface water and sediments. EPA has reviewed the investigation results and previously asked that Chevron conduct further evaluations of these surface water bodies. Chevron agreed and will conduct additional investigations of the three surface water bodies. However, Chevron requests that these not be classified as AOCs. These were not identified as AOCs under the prior RCRA permit. These are environmental media, it has yet to be determined if Chevron has had any adverse impact on these surface water bodies from releases of unpermitted hazardous constituents from the facility. The existing data indicates that these surface water bodies have been impacted by diffuse anthropogenic sources of contamination. Similar pollutants are found in sediments at both background locations and areas adjacent to the facility. Therefore, Chevron requests that the Permit be revised to remove the designation of these three surface water bodies as AOCs. The requirement to complete their investigation can be left in the Permit without designating them as AOCs. Same change should be made in the Statement of Basis on page 29 of 33.

EPA's Response: EPA has made the requested modification. Instead of designating these three water bodies as AOCs 51, 52, and 53, they will be referred to by their full names.

26. Module III, Section B.3. - Corrective Action management Unit (CAMU)

Chevron-Buckeye Comment: Module III, Section B.3. - Corrective Action Management Unit (CAMU) -The draft Permit provides the decision criteria for whether a Corrective Action Management Unit ("CAMU") may be located at a facility. Chevron requests that the permit language be clarified to reflect that the CAMU being approved under this permit satisfies the decision criteria at 40 CFR 264.552(c).

EPA's Response: EPA had added the sentence: "A proposed CAMU, which meets all decision certeria, has been approved under the permit" to address the requested clarification.

27. Module III, Section B. 3. - Corrective Action Management Unit (CAMU)

Chevron-Buckeye Comment: Module III, Section B. 3. - Corrective Action Management Unit (CAMU) – It is stated that "These two storage and/or treatment only areas are to operate for no more than two years." It should be clarified that the two years starts from the date of initial operation not the date of the permit (issuance) and that each unit will have separate operational and start/end dates. Moreover, a 180 day extension can be requested if necessary and granted by EPA for a total of 2.5 years of operation. Currently, Chevron does not plan on initiating the use of these storage and/or treatment areas until sometime after construction of the CAMU has been implemented. The same change should be made in the Statement of Basis on page 7 of 33.

EPA's Response: EPA has added a new sentence to clarify that two-year operating time periods will run independently or consecutively for each of the two treatment areas, and that the two-year period starts from the date of initial operation of each treatment area, not the date of the permit was issued.

28. Chevron-Buckeye Comment: Module III, Section C. 4. - Guidance Documents – Chevron proposes to change the word "follow" to "consider". EPA "Guidance Documents" should be guidance to be considered and not be an enforceable Permit condition.

EPA's Response: EPA has made the requested modification.

29. Module III, Section C – 6. New Interim Corrective Measures (d)

Chevron-Buckeye Comment: Module III, Section C – 6. New Interim Corrective Measures (d) – The text references to "forty" days should be revised to "forty-five" to match numeric values which are listed.

EPA's Response: EPA has made the requested correction.

30. Module III , Section C.8 - Standard Conditions for Corrective Actions -Reporting

Chevron-Buckeye Comment: Module III, Section C.8 - Standard Conditions for Corrective Actions -Reporting – This section as written requires detailed bi-monthly reporting. Chevron recommends annual reporting in place of bi-monthly. Bi-monthly reporting is unnecessary, time consuming and overly burdensome. Chevron proposes an

annual reporting requirement to replace bi-monthly. Chevron also recommends a statement that EPA and the permittee can hold informal discussions to update the site status at any time including on a bi-monthly basis as deemed appropriate.

EPA's Response: EPA has changed the reporting requirement from bi-monthly to quarterly.

31. **Module III, Section D. 3. - Requirements for Performing Corrective Action Phases No 3(b)(iii)**

Chevron-Buckeye Comment: Module III, Section D. 3. - Requirements for Performing Corrective Action Phases No 3(b)(iii) – The text references to "forty" days should be revised to "forty-five" to match numeric values which are listed.

EPA's Response: EPA has made the requested correction.

32. **Module III, Section D.11.- Financial Assurance for Corrective Action**

Chevron-Buckeye Comment: Module III, Section D.11.- Financial Assurance for Corrective Action – Chevron recommends that starting at "Financial assurance mechanisms which Permittee may use are:" and through all the paragraphs that begin with a dash (hyphen) be removed and replaced with "The Permittee may use the financial assurance mechanisms listed in 40 CFR 264.143 to provide financial assurance for corrective action." These are well used and understood mechanisms for RCRA financial assurance and the current language in the draft permit could be interpreted differently.

EPA's Response: No change will be made, as financial requirements contained in the provisions allowed for the use of relevant financial assurance mechanisms listed in 40 CFR 264.143.

33. **Module III, Sections E. F and F (meant G) - Requirements for Newly Identified SWMUs and AOCs**

Chevron-Buckeye Comment: Module III, Sections E. F and F (meant G) - Requirements for Newly Identified SWMUs and AOCs- These Sections provide investigation and CMS/CMI requirements for newly identified SWMUs and AOCs (similar language is also found in Module III - D concerning newly identified AOCs and

SWMUs). Chevron requests that these requirements be removed from the Permit or alternatively require that any newly discovered SWMUs or AOCs be investigated and cleaned up under NJDEP oversight pursuant to the provisions of New Jersey's SRRA.

Historically, NJDEP, EPA and Chevron agreed to investigate other potential areas of concern (PAOCs) with NJDEP as the lead pursuant to New Jersey site remediation requirements as amended by SRRA. We request that the PAOC investigation and subsequent remediation if necessary be conducted under NJDEP oversight in accordance with NJDEP regulations pursuant to SRRA. We have already successfully demonstrated this process with West Yard and Amboy Field cleanup under NJDEP oversight (approximately 100 acres). Therefore we request that these three sections of Module III be removed from the Permit and reference this PAOC process in the permit.

Similarly, in the event that Buckeye has a new release associated with its active petroleum operations, it would be required to quickly respond and cleanup the release under its Discharge Prevention Control and Countermeasure Plan (DPCC Plan) under the New Jersey Spill Act regulations.

Detailed site wide investigations have already been conducted and identified a comprehensive list of known SWMUs and AOCs. Clearly the New Jersey site remediation regulations adequately address the issue of any newly discovered releases which are not currently listed as SWMUs or AOCs in the Permit.

EPA's Response: EPA has deleted the Condition E, F and G, and added a new Condition E. See second part of the response to comment #1. Based on discussions between EPA and NJDEP, it has been agreed in principle that the newly discovered releases, newly discovered SWMUs, AOCs, and Potential AOCs (PAOCs) will be investigated and cleaned up in accordance with provisions of NJDEP's Site Remediation Reform Act (SRRA) and Industrial Site Recovery Act (ISRA) which are consistent with EPA's HSWA requirements. Although NJDEP will be the lead in dealing with these newly identified releases, EPA would be copied on all notification and reporting, and be kept fully abreast of the progress of the clean-up process of the newly identified SWMUs, AOCs and PAOCs.

As a result, EPA has made the changes to Module III to address this requested modification. The intent of the clause is to avoid duplicated efforts in order to meet both USEPA and NJDEP requirements, while addressing the newly identified SWMUs and AOCs.

The permittee has conducted previous comprehensive investigations under EPA oversight to identify SWMUs and AOCs at the facility. The implementation of corrective measures for these SWMUs and AOCs are the focus of this permit renewal. In the event that new SWMUs, AOCs or releases not listed in this permit are identified, the permittee will implement corrective measures for those new areas under NJDEP's site remediation program. This will allow for the timely implementation of corrective measures for any newly identified contamination. The permit has been revised to reflect this by deleting all of Module III Conditions E, F and F (should have been G) and adding a new Module III E. The new permit conditions contained in Module III E requires the permittee to notify the Director of any releases, or newly discovered SWMUs or AOCs. It allows the permittee to investigate and implement appropriate corrective measures for newly discovered SWMUs, AOCs or releases under New Jersey's own site remediation program.

Revised Module III E.

E. NEWLY IDENTIFIED SWMUs AOCs OR RELEASES

(a) The Permittee shall notify the Regional Administrator in writing, of any newly identified SWMUs, AOCs or releases within 15 days of discovery. The notification shall include a description of the newly discovered SWMU, AOC or release and a figure depicting its location.

(b) The Permittee shall investigate and implement corrective measures for newly identified SWMUs, AOCs and/or releases under the New Jersey site remediation program as administered by the NJDEP. The investigation and corrective measures being done for these newly identified SWMUs, AOCs or releases should to the extent practicable, include relevant components of a RCRA Facility Investigation, Corrective Measures Study and Corrective Measures Implementation under NJDEP regulatory oversight. EPA will record its approval of documentation concerning the cleanup(s).

34. Modules IV, V, and VI

Chevron-Buckeye Comment: Module IV, V, and VI – The draft Permit includes a section on land disposal restrictions, waste minimization, and organic air emission standards which, with the exception of Module V. F (Green Remediation), do not appear relevant to the activities proposed under the draft Permit. The Permit should be limited to the RCRA/HSWA corrective action provisions. These provisions are appropriate to long

term operating TSDFs. These provisions should be removed from the Permit. In the event that EPA does not agree to remove the three modules the Permit should make it clear that these requirements are not applicable to the RCRA corrective action permit provisions.

EPA's Response: Modules IV, V, and VI on land disposal restrictions, waste minimization, and organic air emission standards will stay in the renewed permit, as the provisions of these modules may become applicable and take effect when the permittee implements hazardous waste management activities subject to this permit.

35. **Module V, Section F – Green Remediation**

Chevron-Buckeye Comment: Module V, Section F – Green Remediation – This section requires the permittee to describe how its operations comport with the principles and practices of Green Remediation. It is our understanding that the Green Remediation guidance is not a regulatory requirement and therefore should not be included in this Permit. Chevron does support the principle of Green Remediation and has already provided EPA with adequate information on how the proposed corrective measures in the CMS meet these principles.

In the event that EPA does not agree with Chevron's request to remove this permit condition, we request that the Permit acknowledges that Chevron has already met these green remediation provisions for the corrective measures being approved under this Permit.

EPA's Response: The selected corrective measures were evaluated in general against these green remediation provisions. However, when specific workplans are submitted for the corrective measure implementation, EPA will evaluate in detail how well the submittal adheres to current green technologies and practices and offer appropriate comment. Therefore, the condition will stay in the permit.

36. **Chevron-Buckeye Comment:** Chevron is requesting that a table be added to the Permit which lists all of the No Further Action (NFA) determinations made for SWMUs and AOCs identified in Module III.B.2 of the Draft Permit. Currently the NFA determinations are scattered throughout the text of this Module. A single table would help clarify the Permit NFA determinations. We have provided a proposed table in Attachment 1.

37. **EPA's Response:** Section IV of the Statement of Basis includes a table of the SWMUs and AOCs which requiring No Further Action, therefore not need to be part of the renewal permit.

38. **Statement of Basis - Page 7 of 33**

Chevron-Buckeye Comment: Statement of Basis - Page 7 of 33 of the Statement of Basis, in Section VI, North Field Extension SWMUs and AOCs Subject to RCRA Consent Order, we propose to change, "...a separate corporation, whose corporate partners will be responsible for site investigation..." to "....a separate limited liability company, which, along with its members, will be responsible for site investigation....". The company referenced in this portion of the Statement of Basis is a separate limited liability company.

EPA's Response: EPA has made the requested modification.

39. **General New Addition**

Chevron-Buckeye Comment: General New Addition - Chevron requests that a Permit condition be added to recognize that this site includes an active petroleum facility. Buckeye may need to construct, repair or replace structures or other process units on an accelerated schedule to allow for the continued operation of this commercial site. For example, Buckeye may need to quickly install a new tank in an area proposed for soil treatment and disposal in the CAMU. The permit should provide flexibility to allow for excavation and off-site disposal of this area or the implementation of other approved remedial technologies for similar areas approved under the Permit so long as cleanup criteria are met.

EPA's Response: The permit already has language that requires EPA to be notified of planned facility alterations in Module I Condition F. 11. Reporting Planned Changes. However, to address Chevron-Buckeye's concerns, EPA has expanded the Reporting of Planned Changes condition to require the permittee to identify the expedited corrective action that may be taken to allow for facility expansion, upgrades or routine facility operations located at a SWMU or AOC identified in this permit. This will allow the permittee to implement expedited remedies at these areas. The permittee may implement excavation or another remedy identified in the permit. A new permit condition has been added at Module III. B. 5 below to reflect this change.

Module III. B.5. Planned Facility Alterations or Additions at SWMUs or AOCs

The permittee shall give notice to the Director within 60 days of any planned physical alterations or additions to the permitted facility in accordance with Module 1, Condition F.11. Additionally, if the alteration or addition will be conducted in a contaminated SWMU or AOC listed in this permit, the permittee shall also provide the Director with a description of how the SWMU or AOC or relevant portion thereof, will be remediated to accommodate for the planned addition or alteration. To allow for the planned addition or alteration, the permittee may use excavation or other corrective action technologies approved under this permit to address the contaminated relevant SWMU or AOC. The description of the corrective measures must also include a post corrective action monitoring plan.

B Responses to NJDEP comments

1. General

NJDEP Comment: Chevron is currently investigating a number of the Potential Areas of Concern (PAOC) at the site. After the investigations have been completed, a remedy selection process will be necessary for the PAOCs under a future permit modification. This information should be added to the Statement of Basis – Attachment A and the Module III of the draft RCRA Corrective Action Permit renewal.

EPA's Response: Based on discussions between EPA and NJDEP, it has been agreed that the Potential Areas of Concern (PAOCs), as well as new releases discovered at the Chevron-Buckeye site, will be investigated and cleaned up under the oversight of NJDEP, in accordance with provisions of NJDEP's Site Remediation Reform Act (SRRA) and Industrial Site Recovery Act (ISRA) which are consistent with EPA's HSWA requirements. The intent of the clause addressing the newly identified SWMUs and AOCs is to avoid duplicated efforts in order to meet both USEPA and NJDEP requirements. Although NJDEP will be the lead in dealing with these newly identified releases, EPA would be copied on all notification and reporting, and be kept fully abreast of the progress of the clean-up process of the newly identified SWMUs, AOCs, and PAOCs.

2. LNAPL recovery measures at the site

NJDEP Comment: 2. Chevron's annual Stabilization Measures Status Report discusses the LNAPL recovery measures at the site. For a number of areas, the nomenclature does not correspond to SWMUs or AOCs. The NJDEP is concerned that these areas are not addressed in the draft HSWA permit. At the following areas Chevron needs to transition from LNAPL recovery to evaluation for groundwater remediation in the Corrective Measures Implementation Phase: Area EY 3, Area EY 4a, and Area NF4. Listed below are the more significant LNAPL areas where dissolved benzene treatment needs to occurring. This information should be added to the Statement of Basis – Attachment A and the Module III of the draft RCRA Corrective Action Permit renewal.

EPA's Response: Some of the existing light non-aqueous phase liquid (LNAPL) areas overlap several SWMUs and AOCs. The following table identifies 21 such areas where LNAPL was determined to be present in the subsurface. The LNAPL consists of various petroleum type materials. For the purpose of implementing corrective measures, each of the LNAPL areas has been associated with existing SWMU(s) and/or AOC(s) as shown in the table below. The permittee will remediate each LNAPL area as part of the remediation of the associated SWMU(s) and/or AOC(s). Therefore, there is no need for separate designation for the LNAPL areas. EPA and NJDEP will continue to coordinate to ensure that any activities required by the permit, and/or proposed by the permittee pursuant to the permit for these SWMUs and AOCs, fully address all associated groundwater cleanup issues.

LNAPL Area	Associated SWMUs/AOCs
NF2	AOC 44, MY-AOC 16
State St Parking Lot	SWMU 11B
AOC 8-NF6	AOC 8, AOC 15
AOC 19	AOC 19
AOC 25	AOC 25
EY4b	AOC 26, AOC 14
NF3	SWMU 35, MY-AOC 16
NF 5	AOC 8, AOC 15
PAOC 15	AOC 6B, AOC 26
SWMU 8	SWMU 8
SWMU 43	SWMUs 5 and 43
EY3	EY-AOC 16
EY4a	AOC 6B, EY-AOC 16
NF4	SWMU 31
AOC 28	AOC 28

AOC 19	AOC 19
AOC 29	AOC 29
EY1	SWMU 42
SWMU 40	SWMU 40
SWMU 41	SWMU 41
SWMU 42	SWMU 42

3. Area NF2 (Main Yard)

NJDEP Comment: 3. Area NF2 (Main Yard) – There are benzene concentrations in ground water over 100 ppb and LNAPL recovery is occurring with absorbent socks. Since absorbent socks are being used for the LNAPL recovery, active dissolved remediation is required. This information should be added to the Statement of Basis – Attachment A and the Module III of the draft RCRA Corrective Action Permit renewal.

EPA's Response: No change is necessary, as corrective measure proposed for NF2 LNAPL areas associated with AOC 16A and AOC 44 already requires ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation.

4. State Street Parking Lot (between Central Yard and East Yard) – MW TP2

NJDEP Comment: 4. State Street Parking Lot (between Central Yard and East Yard) – MW TP2-018 has benzene concentrations above 1 ppm and LNAPL is being recovered using absorbent socks. It appears this is an on-going source and active remediation needs to be proposed. This information should be added to the Statement of Basis – Attachment A and the Module III of the draft RCRA Corrective Action Permit renewal.

EPA's Response: To address NJDEP's groundwater concern at State Street Parking Lot, associated with SWMU 11B, EPA has added two additional corrective measures, Item 3) ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if necessary, 4) MNA and file a CEA for groundwater.

5. LNAPL Recovery program

NJDEP Comment: 5. The NJDEP agrees that Chevron's LNAPL recovery program is in compliance with NJDEP LNAPL requirements at N.J.A.C. 7:26E-5.1(e). By making the changes requested in comments 2, 3, 4, 9 and 14, the draft HSWA permit will be consistent with the Chevron's LNAPL Program.

EPA's Response: Changes have been made in response to NJDEP's comments 2, 3, 4, 9, and 14 associated with LNAPL remediation program.

6. An implementation schedule is needed in the permit

NJDEP Comment: 6. An implementation schedule is needed in the permit.

EPA's Response: EPA has added a section 4) Implementation Schedule to Page III-23 to address NJDEP's comment:

"Permittee shall submit a Correction Action Implementation schedule within 90 days of the effective date of the permit."

7. Site-wide ground water monitoring programs

NJDEP Comment: 7. Chevron has a number of site wide groundwater monitoring programs. All groundwater monitoring programs, except the post closure program for the Surge Pond, need to be included in the draft HSWA permit.

EPA's Response: EPA has added a section (ix) to the C-8 page III-27: "Permittee shall submit a site-wide groundwater monitoring program."

8. All RCRA GPRA Sites, both EPA and NDEP lead, require remedial action permits (RAPs)

NJDEP Comment: 8. All RCRA GPRA Sites, both EPA and NDEP lead, require remedial action permits (RAPs) for groundwater contamination above the New Jersey Ground Water Remediation Standards (GWRS) and for soil areas which require a deed notice or other institutional controls (N.J.A.C. 7:26C-6.1 et. seq.) All SWMUs and AOCs, where there is groundwater contamination above the GWRS remaining after remedy implementation, need to be included in a site-wide groundwater RAP. For SWMUs and AOCs, where a deed notice or other institutional controls are required, a site-wide Soils RAP will be needed. This information should be added to the Statement of Basis – Attachment A and the Module III of the draft RCRA Corrective Action Permit renewal.

EPA's Response: EPA has added the following section to address NJDEP's comment:

"As part of the implementation of corrective measures, the permittee shall obtain the appropriate NJDEP remedial action permits (RAPs) pursuant to NJAC 7:26C-6.1 et. seq. for all SWMUs and AOCs where a deed notice or other institutional control is required for soils or where groundwater contamination exceeds applicable Groundwater Remediation Standards.

9. SWMUs and AOCs where LNAPL Remedial Measures are being implemented

NJDEP Comment: 9. For SWMUs and AOCs where LNAPL Remedial Measures (LRM) are being implemented, monitored natural attenuation (MNA) cannot be implemented as a final remedy with a CEA until all the LNAPL is removed to the extent practicable. In many cases dissolved phase remediation will have to be implemented following LRMs before the area is ready for MNA and a CEA. The SWMUs and AOCs where LRMs conflict with the MNA and CEA requirement include SWMUs 5, 6, 8, 43 and AOCs 25, 31, 44. The remedy description needs to be updated for the above SWMUs and AOCs. In addition the specific LRMs being implemented at each of the above SWMUs and AOCs should be specified in the applicable SWMU and AOC description. This information should be added to the Statement of Basis – Attachment A and the Module III of the draft RCRA Corrective Action Permit renewal.

EPA's Response: EPA has added the requested clarification statement: "until all the LNAPL is removed to the extent practicable" to the corrective measures for SMWUs 5, 6, 8, 43, AOCs 25, 31, and 41 where MNA is a proposed final remedy.

10. Statement of Basis, Page 1

NJDEP Comment: 10. p. 1 – This comment is with regard to the statement that remediation has been completed in the West Yard and Amboy Field areas. The NJDEP issued a soils-only NFA for Amboy Field and the West Yard areas. Three Soil Remedial Action Permits were issued, one for Amboy Field and two for the West Yard (Mauer Ave and Amboy Ave). Chevron is responsible for institution and engineering controls under NJDEP's Soil Remedial Action Permits. Chevron still needs to address the groundwater issues in Amboy Field and the West Yard Area areas. The Statement of Basis should be updated to include this information.

EPA's Response: EPA has added a new sentence requested by NJDEP:

"Chevron remains entirely responsible under NJDEP oversight for implementing engineering control and institutional control under NJDEP's Soil Remedial Action permits. Chevron will continue to address the groundwater issues in Amboy Field and the West Yard Area areas."

11. Statement of Basis, Page 3

NJDEP Comment: 11. p. 3 – In the last paragraph it should be clarified that the Effluent Treatment Plant is currently operated by Buckeye under a New Jersey Permit Discharge Elimination System (NJPDES) Discharge to Surface Water Permit.

EPA's Response: EPA has added the requested modification on page 3: "currently owned and operated by Buckeye under a New Jersey Permit Discharge Elimination System (NJPDES) Discharge to Surface Water Permit".

12. Statement of Basis, Page 4

NJDEP Comment: 12. p. 4 – Page II-4 of Chevron's 1994 HSWA Permit states that "The facility has three RCRA regulated units , the Surge Pond, East Yard Basin and Landfarm. These units are being closed under the authorized State-RCRA program." Page 4 of the Statement of Basin for the 2012 HSWA permit states that the Surge Pond and the Landfarm were closed under the 1994 (HSWA) permit. The statement of basis needs to be revised to state that closure the RCRA regulated land disposal units at the Chevron facility was conducted by the NJDEP under their April 7, 1992 NJPDES Discharge to Groundwater Permit, not the 1994 HSWA permit as stated on page 4 of the 2012 draft HSWA permit.

EPA's Response: EPA has added a new sentence to address the requested correction: "The closure of the RCRA regulated land disposal units at the Chevron facility was conducted by the NJDEP under its April 7, 1992 NJPDES Discharge to Groundwater Permit"

13. Statement of Basis, Page 5

NJDEP Comment: 13. p. 5 – This comment is with regard to the statement that remediation has been completed in the West Yard and Amboy Field areas. The NJDEP issued a soils-only NFA for Amboy Field and the West Yard areas. Three Soil Remedial Action Permits were issued, one for Amboy Field and two for the West Yard (Mauer Ave

and Amboy Ave). Chevron is responsible for institution and engineering controls under NJDEP's Soil Remedial Action Permits. Chevron still needs to address the groundwater issues in Amboy Field and the West Yard Area areas. The Statement of Basis should be updated to include this information.

EPA's Response: See response to Comment #10.

14. Statement of Basis, Page 5 – Section IVa

NJDEP Comment: 14. p. 5 – Section IV a. Enhanced in-situ bioremediation is another technology that is being used to remediate contaminated groundwater (AOC 36). Electrical resistance heating is another technology being used to remediate LNAPL (AOC 31). These technologies should be added to the list of technologies at the bottom of the page.

EPA's Response: EPA has added the requested modification to include "Enhanced in-situ bioremediation and electrical resistance heating" at end of page 5.

15. Statement of Basis, Attachment A. page 9 - SWMU 2

NJDEP Comment: 15. p. 9 SWMU 2 – Monitoring and post-closure care is being done under NJDEP oversight. A remedial action permit has not been issued.

EPA's Response: EPA has made the requested modification and replaced "an NJDEP Remedial Action Permit" with "NJDEP oversight"

16. Statement of Basis, Attachment A, page 9 - SWMU -3

NJDEP Comment: 16. p. 9 SWMU 3 – This unit is not a RCRA regulated unit. Initially, Chevron included the East Side Basin under their interim status filing in their RCRA 1981 Part A application, but the unit was later determined to be a protective filing (August 31, 2006 letter from Phil Cole, NJDEP to Robert Lavorerio, Chevron USA, Inc.) . There is currently a groundwater monitoring program, but the NJDEP has not issued a Remedial Action Permit.

EPA's Response: EPA has made the requested modification and replaced "an NJDEP Remedial Action Permit" with "NJDEP oversight.

17. Statement of Basis, Attachment A, page 11- SWMU 10 Item 6

NJDEP Comment: 17. p. 11 SWMU 10 – Item 6 needs to be clarified. The NJDEP assumes that item 6 is meant to read "in-situ geochemical stabilization."

EPA's Response: EPA has made the requested modification.

18. Statement of Basis, Attachment A, page 23- AOC 25

NJDEP Comment: 18. p. 23 AOC 25 – Dissolved benzene contamination is stable at about 200 ppb. Active groundwater remediation is necessary since benzene concentrations are greater than 100 ppb.

EPA's Response: EPA has added an additional corrective measure of section 2) ISCO or enhanced bioremediation for benzene concentrations are greater than 100 ppb for AOC 25.

19. Statement of Basis, Attachment A, page 25- AOC 31

NJDEP Comment: 19. p. 25 AOC 31 – Electrical resistance heating is being used to treat organic contaminated soil, organic contaminated groundwater and LNAPL at this AOC. The AOC description needs to be revised.

EPA's Response: EPA has added requested clarification at the end of corrective measure item 1) to include "contaminated groundwater and LNAPL."

20. Statement of Basis, Attachment A, page 29 – Note 1

NJDEP Comment: 20. p. 29 – Note 1: This comment is with regard to the statement that remediation has been completed in the West Yard and Amboy Field areas. The NJDEP issued soils only NFA for Amboy Field and the West Yard areas. Three Soil Remedial Action Permits were issued, one for Amboy Field and two for the West Yard (Mauer Ave and Amboy Ave). Chevron is responsible for institutional and engineering controls under NJDEP's Soil Remedial Action Permits. Chevron still needs to address the groundwater issues in Amboy Field and the West Yard Area areas. This note needs to be revised.

EPA's Response: See response to Comment #10.

21. Module II, page 1

NJDEP Comment: 21. p. II-1 – In the last paragraph it should be clarified that the Effluent Treatment Plant is currently operated by Buckeye under a NJPDES Discharge to Surface Water Permit.

EPA's Response: See response to Comment #11

22. Module II, page 2

NJDEP Comment: 22. p. II-2 The permit states: 'Before reaching bedrock at a total depth of approximately 90 feet, the last 25-30 feet is a layer of dark green to black fine grained diabase." This is not consistent since diabase is a type of bedrock. This section needs to be revised.

EPA's Response: EPA replaces the text quoted in NJDEP comment #22 with the following text from the CMS report:

"Bedrock was encountered in several deep borings onsite at 65 to 85 feet below ground surface."

23. Module III, page3 – SWMU 2

NJDEP Comment: 23. p. III-3 – SWMU 2 – Monitoring and post-closure care is being done under NJDEP oversight. A remedial action permit has not been issued.

EPA's Response: See response to Comment #15

24. Module III, page 3 – SWMU 3

NJDEP Comment: 24. p. III-3 – SWMU 3 – This unit is not a RCRA regulated unit. Initially, Chevron included the East Side Basin under their interim status filing in their RCRA 1981 Part A application, but the unit was later determined to be a protective filer (August 31, 2006 letter from Phil Cole, NJDEP to Robert Lavorerio, Chevron USA, Inc.). There is currently a groundwater monitoring program, but the NJDEP has not issued a Remedial Action Permit.

EPA's Response: See response to Comment #16.

25. Module III, page 5, SWMU 10- Item 6

NJDEP Comment: 25. p. III-5 SWMU 10 – Item 6 needs to be clarified. The NJDEP assumes that item 6 is meant to read "in-situ geochemical stabilization".

EPA's Response: EPA has made the requested modification.

26. Module III, page 8, AOC 25

NJDEP Comment: 26. p. III-8 AOC 25 – Dissolved benzene contamination is stable at about 200 ppb. Active groundwater remediation is necessary since benzene concentrations are greater than 100 ppb.

EPA's Response: See response to Comment #18.

27. Module lll, page-18, AOC 31

NJDEP Comment: 27. p. III-18 AOC 31 – Electrical resistance heating is being used to treat organic contaminated soil, organic contaminated groundwater and LNAPL at this AOC. The AOC description needs to be revised.

EPA's Response: See response to Comment #19.

28. Module III, page 22 – Note 1

NJDEP Comment: 28. p. III-22 – Note 1: This comment is with regard to the statement that remediation has been completed in the West Yard and Amboy Field areas. The NJDEP issued a soils-only NFA for Amboy Field and the West Yard areas. Three Soil Remedial Action Permits were issued, one for Amboy Field and two for the West Yard (Mauer Ave and Amboy Ave). Chevron is responsible for institution and engineering controls under NJDEP's Soil Remedial Action Permits. Chevron still needs to address the groundwater issues in Amboy Field and the West Yard Area areas. The note needs to be revised.

EPA's Response: See response to Comment #10.

FINAL STATEMENT OF BASIS
RCRA PERMIT RENEWAL FOR IMPLEMENTATION OF CORRECTIVE ACTION MEASURES

Chevron, USA Inc. and Buckeye Perth Amboy Terminal LLC
PERTH AMBOY, NEW JERSEY
EPA ID No.: NJD081982902

I. INTRODUCTION AND PROPOSED REMEDIES

This Statement of Basis (SB) outlines the United States Environmental Protection Agency's (EPA) proposed corrective action measures for the facility, owned in part by Chevron USA, Inc (Chevron) and in part by Buckeye Perth Amboy Terminal LLC (Buckeye), located on 259.5 acres, mainly in the City of Perth Amboy and partially in Woodbridge Township, Middlesex County, New Jersey. The proposed corrective action measures are incorporated in a draft permit renewal for the Chevron-Buckeye facility (facility). The facility is subject to a permit and required to perform corrective measures pursuant to the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 (RCRA) and the Hazardous and Solid Waste Amendments of 1984 (HSWA), 42 United States Code (USC) Section 6901 et seq. The Corrective Action program is designed to ensure that facilities investigate and, if necessary, clean up any releases of hazardous wastes or hazardous constituents that may have occurred at their properties, and any releases that might have migrated off-site.

In 1994, EPA issued a RCRA permit to Chevron for its facility, which then contained 339 acres. Pursuant to the 1994 permit, Chevron has conducted numerous environmental investigations to assess the nature and extent of contamination attributed to the facility and implemented numerous interim corrective measures to address on-site and off-site contamination. Working with the United States Environmental Protection Agency (EPA) and the New Jersey Department of Environmental Protection (NJDEP), Chevron has also studied and evaluated various remedial alternatives in determining appropriate cleanup methods. Chevron completed remediation of the West Yard and Amboy Field areas under NJDEP and EPA supervision, and these areas are not included in the proposed permit renewal. Chevron remains entirely responsible under NJDEP oversight for implementing engineering control and institutional control under NJDEP's Soil Remedial Action permits. Chevron will continue to address the groundwater issues in Amboy Field and the West Yard Area areas. In addition, a portion of the North Field Extension (NFE) is not included in this proposed permit renewal because it is being acquired by new owners and will be the subject of a RCRA Section 7003 Order On Consent under which site investigation and necessary remediation will take place. In August 2012, Chevron sold a large portion of the facility property to Buckeye, while still retaining the northern portion of the Main Yard. Since the former Chevron property is now co-owned by Chevron and Buckeye, accordingly the corrective action permit renewal for the former Chevron property will be issued to Chevron-Buckeye, owners of the facility, as permittee.

A total of 44 Solid Waste Management Units (SWMUs) and 53 Areas of Concern (AOCs) have been identified at the facility under the proposed permit. In the proposed permit renewal, the facility is divided into major geographical areas referred to as the Central Yard, the Main Yard, the East Yard, and the NFE.

EPA has determined that RCRA corrective measures are required at specific SWMUs and AOCs, or portions thereof, at the facility, and that no further action is required at other SWMUs and AOCs, or portions thereof. To address contamination, EPA is proposing a corrective action strategy involving various technologies including in-situ treatment of soils and groundwater, monitored natural attenuation of low level contaminated groundwater, on-site stabilization of contaminated soils, and disposal of contaminated soils in an on-site corrective action management unit (CAMU). Additional soil and groundwater sampling will be utilized to confirm that contaminant concentrations in soil and groundwater have been reduced to levels protective of human health and the environment. Specifically, EPA proposes to:

(1) require the implementation of corrective measures for specifically identified SWMUs and AOCs, or portions thereof, at the facility;

(2) approve the construction and operation of an on-site CAMU in the Main Yard for the disposal of remediation wastes from the implementation of corrective action remedies; and,

(3) determine that no further action (NFA) is required for specific SWMUs and AOCs, or portions thereof, at the facility.

This SB includes an overview of environmental investigations and the specific corrective action measures (including no further action) that are proposed. Information summarized in this SB is contained in greater detail in the Administrative Record for the facility. Pursuant to 40 C.F.R. § 124.10, EPA issued a Public Notice on December 28, 2012 indicating that EPA had made a tentative determination to renew Chevron-Buckeye's HSWA permit, subject to public notice and comment. The Public Notice announced a sixty (60) day public comment period during which the draft Permit prepared for Chevron-Buckeye 's Perth Amboy, NJ facility was available for inspection. The Notice further invited comments from interested citizens, and announced a public meeting which was held on January 15, 2013. The public comment period lasted from December 28, 2012 through March 5, 2013.

Chevron-Buckeye and NJDEP were the only two parties that have submitted written comments concerning the draft Permit, numbering 38 and 28 comments, respectively. EPA's responses to these public comments are contained in the Responsiveness Summary.

I. FACILITY BACKGROUND

The Chevron-Buckeye facility subject to the proposed permit is a 259.5-acre industrial facility located in an industrial area. The site has been utilized for industrial operations since 1920. Barber Asphalt Company built and operated an asphalt refinery in 1920. The California Oil Company (which later became Chevron) purchased the property in 1946 and expanded operations into a full service refinery in 1950. In 1983, Chevron shut down several process units and scaled back the refinery operation to asphalt topping. Chevron suspended operation of the asphalt operation in 2009. In August 2012, Chevron sold a large portion of the property to Buckeye, while retaining ownership of the northern portion of the Main Yard. Chevron and Buckeye, as owners of the facility property, are responsible for permit compliance, and are the designated permittee.

The facility is bounded to the north and south by industrial properties and to the west by commercial and residential properties along Convery Boulevard. Amboy Avenue runs north-south through the western portion of the facility and State Street runs north-south through the eastern portion. Maurer Road crosses east-west through the central portion of the facility and connects Amboy Avenue to State Street. The site is bounded to the east by the Arthur Kill, which provides docking berths for tanker ships. Woodbridge Creek flows from the northwest to southeast through the northern portion of the facility. Spa Spring Creek flows along the northern property boundary and discharges into Woodbridge Creek. Groundwater at the facility is not used as a drinking water source, and some areas are saline due to naturally-occurring salt water intrusion. The current facility consists of tank fields, the asphalt area, process areas, offices, mechanical shops, wastewater treatment units, pipelines, and tanker docks. The NFE is a vacant tract of land separated from the remainder of the facility by Woodbridge Creek, and has not been developed or used by Chevron for industrial or commercial purposes.

Under the 1994 permit, Chevron submitted the RCRA Facility Investigation Report (RFI Report) for the facility on December 10, 2003 and the Supplemental RFI Report in February 2008. These reports address SWMUs and AOCs at the facility.

The facility generated various wastewaters including: process wastewater from the production processes; non-contact cooling water; water from a steam generator, cooling tower, and boiler; wastewater generated from washing process areas; heat exchanger cleaning water; and laboratory wastewater. In addition, the facility has managed stormwater which may contain hazardous constituents through contact with hazardous materials located in process areas. In 1976, Chevron started operating the Effluent Treatment Plant (ETP), currently owned and operated by Buckeye under a New Jersey Permit Discharge Elimination System (NJPDES) Discharge to Surface Water Permit, to further treat wastewater before it is discharged to Woodbridge Creek. The units utilized for the treatment of wastewater and the recovery of recyclable material are: Diversion/Collection Tanks; an API Separator; an Induced Air Floatation (IAF) Unit; Float Separation Tanks including Tank 9205; an Equalization Tank; a Rotating Biological Contactors

System; Clarifier Tanks; and a Post-aeration Tank. The ETP operates under a permit from the NJDEP. Previously, the facility had two hazardous waste RCRA regulated units. These were two regulated units at the site, a surface impoundment called the Surge Pond in the Main Yard and a land treatment unit called the Landfarm in Amboy Field. Both units managed petroleum RCRA listed hazardous wastes. The closure of the RCRA regulated land disposal units at the Chevron facility was conducted by the NJDEP under its April 7, 1992 NJPDES Discharge to Ground Water Permit. Chevron closed the Surge Pond in-place through stabilizing the sludge and installing a cap. Closure activities at the Surge Pond were completed in December 2004. The closed in-place Surge Pond area is currently subject to monitoring and post-closure care under NJDEP oversight. The former Landfarm was clean closed through the removal and off-site disposal of all wastes and contaminated soils. There are currently no operating hazardous waste management units at the facility. The only hazardous waste management at the facility is short term (less than 90 days) container storage.

III. PERMIT FRAMEWORK FOR CORRECTIVE MEASURES

Section 3004(u) of RCRA, 42 U.S.C. § 6924(u) and its implementing regulations promulgated in 40 CFR § 264.101 require corrective action for releases of hazardous wastes or hazardous constituents from any SWMU. The federal corrective action implementation process includes RCRA Facility Assessment (RFA), a RCRA Facility Investigation (RFI), and corrective measures. Corrective measures include interim corrective measures (also called interim remedial measures or stabilization measures), a Corrective Measures Study (CMS), Final Corrective Measures Selection (also called Final Remedy Selection) and a Corrective Measures Implementation (CMI) phase. Under some circumstances interim corrective measures may be evaluated as part of a CMS and their continued implementation become final corrective measures, or their successful completion can support NFA determinations.

EPA, with assistance from NJDEP, prepared a draft RFA report in February 1989. A total of 51 SWMUs and 16 Areas of Concern (AOCs) were identified and included in the facility's 1994 RCRA Permit. Module III of the 1994 RCRA permit delineates conditions for implementing the RCRA corrective action program which included RFI, CMS, and other provisions. An additional 11 SWMUs and 37 AOCs were identified at the facility after 1994, pursuant to the provisions of the 1994 RCRA permit.

Chevron conducted the RFI at the facility pursuant to the 1994 permit. The RFI was conducted in phases. The results of the initial RFI were submitted to EPA in a RFI Report dated December 10, 2003. Additional phases of the RFI were reported in the Supplemental RFI Report dated February 2008. Following completion of the RFI, Chevron submitted various documents related to the CMS phase in late 2008, including a CMS Pre-Design Investigation Results Report for the Main Yard, East Yard and Central Yard, a CMS Final Report for the Main Yard, East Yard, and Central Yard, a CMS Final Report for AOC 29, and a Corrective Action Management Unit CAMU) Application, and revisions thereto. The CMS Final Reports contain proposed

corrective measures for specific SWMUs and AOCs at the facility, which include use of an on-site CAMU.

In May 1998, Chevron entered into a Memorandum of Agreement (MOA) with NJDEP to investigate and clean up the entire West Yard and Amboy Field to facilitate the sale and redevelopment of these two parcels by new owners. Chevron's investigation and cleanup of the West Yard and Amboy Field under NJDEP supervision included SWMUs #33, 37, 54, 55, 56, 57, 58, 59, 60, 61, and 62 related to the West Yard, and SWMUs #4 and 23, and AOCs #4 and 20 related to the Amboy Filed. Pursuant to the MOA, Chevron completed investigation of the SWMUs and AOCs, and subsequently implemented remedial actions for these areas. NJDEP reviewed and approved Chevron's remedial actions for the West Yard and Amboy Field. EPA has determined that the investigation and remediation of the West Yard and Amboy Field SWMUs and AOCs under NJDEP oversight are consistent with the facility's 1994 permit provisions, and are protective of human health and the environment. Chevron remains entirely responsible under DEP oversight for implementing engineering control and institutional control under NJDEP's Soil Remedial Action permits. Chevron will continue to address the ground water issues in Amboy Field and the West Yard Area areas

IV. RCRA CORRECTIVE ACTION MEASURES

a. SWMUs and AOCs Requiring Corrective Measures

EPA has determined that corrective measures are required to be implemented for specific SWMUs and AOCs, or portions thereof, in the Central Yard, East Yard and Main Yard. Proposed corrective measures have been evaluated, including consideration of alternatives, based on reports submitted by Chevron under its current permit. The corrective measures include the remediation of soils and groundwater to levels protective of human health and the environment.

To summarize, there are areas within the facility that investigations have shown to have contaminated soil conditions. Depending on the nature and extent of the contamination, these SWMUs and AOCs will be subject to specific corrective measures, which may include excavation and disposal in the on-site CAMU, in-situ containment and stabilization, capping, or in-situ chemical oxidation (ISCO). There are also areas at the facility that investigations show to have contaminated groundwater, and 6 SWMUs and AOCs which contain light non-aqueous phase liquid (LNAPL). The contaminated groundwater will be subject to specific corrective measures depending on the nature and extent of the contamination. These measures may include monitored natural attenuation, in-situ stabilization, ISCO treatment and use restrictions. The LNAPL areas will be subject to vacuuming, extraction and/or absorption, enhanced in-situ bioremdiation and electrical resistance heating.

Attachment A of this SB contains more detailed information on the corrective measures for specific SWMUs and AOCs at the facility.

b. SWMUs and AOCs Requiring No Further Action

Under the RCRA corrective action program, a No Further Action (NFA) determination can be made when a SWMU or AOC has been remediated to levels which are protective of human health and the environment. An NFA determination can also be made if investigation shows that releases from the SWMU or AOC did not occur or did not result in risks to human health or the environment. EPA has determined that NFA determinations are appropriate for specific SWMUs and AOCs, or portions thereof, at the East Yard, Central Yard, and Main Yard of the facility, as follows:

SWMU 1 – North Field Basin
SWMU 2 – Surge Pond
SWMU 3 – East Yard Basin
SWMUs 9, 11B, 13, 14, 25, and 52 – Tetra-ethyl Lead (TEL) Burials
SWMU 32 – Polychlorinated Biphenyls (PCB) Waste Storage Area in East Yard Area Warehouse
SWMU 45 – Kidney Pond (closed and grouped with SWMU 3)
SWMU 52 – Potential TEL Burial Area Southwest of Tank 13
AOC 2 – Potential Discharge – Tank 3
AOC 18 – Potential Discharge – Tank 2
AOC 21 – Maurer Road Excavation/State Street Loading Rack
AOC 30 – Tank 27 Pipeway
AOC 32 – Tank 16 Basin

Attachment A to this Statement of Basis contains more detailed information on the NFA determinations.

V. Corrective Action Management Unit (CAMU)

A CAMU will be located within the facility under the proposed permit as a permanent disposal repository for remediation waste (such as contaminated soil and debris) produced by implementation of certain corrective measures under the proposed permit. Federal regulations authorize EPA to designate one or more areas of a facility as a CAMU (40 CFR § 264.552). The CAMU at the Chevron facility will be designed, constructed, and used in accordance with federal CAMU regulations. The specifications and requirements for the CAMU are set forth in Module III of the proposed permit, and the CAMU Application submitted by Chevron.
The CAMU will be located in the northwest corner of the Main Yard, adjacent to SWMU 43 and in the area of former Tanks 312, 313, and 318. The CAMU will be constructed in phases (using individual, separate containment cells) for the permanent on-site disposal of soil and debris. The maximum capacity of the CAMU will be 100,000 cubic yards.

There also are two designated staging areas within the facility which will be used for temporary storage and treatment of remediation waste prior to its disposal in the CAMU. These two areas will operate for not more than two years.

VI. North Field Extension SWMUs and AOCs Subject to RCRA Consent Order

The NFE site of the Chevron facility is a triangular-shaped property located in the Sewaren section of Woodbridge Township, Middlesex County. The NFE has not been developed or used by Chevron for industrial/commercial purposes. A Northern Parcels site of 15.5 acres contains the 5 SWMUs and 2 AOCs that were identified in the NFE. The Northern Parcels 15.5 acre site will be acquired by a separate limited liability company, which, along with its members, will be responsible for site investigation and necessary corrective measures under a separate RCRA Administrative Order On Consent. As a result, the Northern Parcels site is not incorporated in the proposed permit.

VII . FINANCIAL ASSURANCE

The proposed permit incorporates provisions for financial assurance for corrective action, pursuant to 40 CFR § 264.101. These provisions list mechanisms which the Permittee may use to establish financial assurance for necessary corrective measures and long term care.

VIII. PUBLIC PARTICIPATION

Pursuant to 40 C.F.R. § 124.10, EPA issued a Public Notice on December 28, 2012 indicating that EPA had made a tentative determination to renew Chevron-Buckeye's HSWA permit, subject to public notice and comment. The Public Notice announced a sixty (60) day public comment period during which the draft Permit prepared for Chevron-Buckeye 's Perth Amboy, NJ facility was available for inspection. The Notice further invited comments from interested citizens, and announced a public meeting which was held on January 15, 2013. The public comment period lasted from December 28, 2012 through March 5, 2013.

Chevron-Buckeye and NJDEP were the only two parties that have submitted written comments concerning the draft Permit, numbering 38 and 28 comments, respectively. EPA's responses to these public comments are contained in the Responsiveness Summary.

STATEMENT OF BASIS – ATTACHMENT A

INFORMATION ON SOLID WASTE MANAGEMENT UNITS (SWMU) and AREAS OF CONCERN (AOC)

The listing of abbreviations used is at the end of the Attachment.

1. SOLID WASTE MANAGEMENT UNITs – SWMUs

SWMU No. 1 consists of the former North Field Basin which was closed in accordance with a closure plan approved by the NJDEP. NFA for both soil and groundwater is proposed.

SWMU No. 2 consists of the Surge Pond. The Surge Pond was closed in-place by Chevron under NJDEP oversight through stabilizing the sludge and then capping the unit. Closure activities at the Surge Pond were completed in December 2004. The closed in-place Surge Pond area is currently subject to monitoring and post-closure care under NJDEP oversight. NFA is proposed for both soil and groundwater.

SWMU No. 3 consists of an approximately 500-foot by 110-foot rectangular earthen impoundment constructed in 1977 and shut down in 1988. The basin is located along the Arthur Kill bulkhead in the East Yard. The basin served as storage for stormwater runoff, process water and water draws from ASTs in the East Yard before transport to the ETP. The central portion of SWMU 3 overlies the former Oil Water Separator (SWMU 36) located along the bulkhead. This is a RCRA regulated unit, which closed under NJDEP oversight and is currently being monitored via closure wells installed in the area under NJDEP oversight. NFA is proposed for both soil and groundwater.

SWMU No. 5 consists of a 20-foot by 20-foot TEL sludge burial area located west of the Surge Pond in the North Field, which was identified as a solid waste management unit based on the presence of TEL burial. TEL Burial sites are composed of tank bottom sludges containing tetra-ethyl lead. During past operations, TEL was used extensively for gasoline. The TEL would settle out at the bottom of the AST and collect in the bottom sludges. The deposits would be periodically removed from the tanks and, typically, were buried in the soils surrounding the tanks of the Refinery. In general, the use of TEL ceased in 1975. The corrective measures are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if necessary; 2) in-situ stabilization for lead in soil, installation of a cap, and filing a deed notice; 3) continue LRMs for groundwater, until all the LNAPL is removed to the extent practicable; and 4) MNA and file a CEA for groundwater.

SWMU No. 6 is the TEL Burial Area east of Tank 9209, which consists of a 20-foot by 20-foot TEL sludge burial located in the western portion of Tank Basin 306 in the North Field, which was identified as a solid waste management unit based on the presence of a TEL burial. The corrective measures are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if necessary; 2) in-situ stabilization for lead in soil and filing a deed notice; 3) excavation, ex-situ stabilization and disposal in CAMU for TEL/TOL concentration > 2 mg/kg for soil; 4) filing a deed notice for benzo(a)pyrene (BAP) concentrations < 10 mg/kg and > 0.66 mg/kg; 5) continue LRMs for groundwater, until all the LNAPL is removed to the extent practicable; and 6) MNA and filing a CEA for groundwater.

SWMU No. 7 consists of two 20-foot by 20-foot TEL sludge burials located to the south and east of Tank Basin 305 in the North Field. The corrective measures are: 1) in-situ stabilization for lead in soil and filing a deed notice; 2) excavation, ex-situ stabilization, and disposal in CAMU for TOL concentration > 2 mg/kg in soil; 3) filing a deed notice for benzo(a)pyrene (BAP) concentrations < 10 mg/kg and > 0.66 mg/kg; and 4) further evaluation of groundwater.

SWMU No. 8 consists of two 20-foot by 20-foot TEL sludge burials located north-west of the former East Yard Basin (SWMU 3) in the East Yard. The SWMU 8 LNAPL Area was identified in 2004 when LNAPL was detected in MW-132, which was installed in the center of the SWMU 8 burial in October of 2002. The corrective measures for the contaminated media identified at SWMU 8 are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if necessary; 2) excavation, ex-situ stabilization and disposal in the CAMU for lead in soil and TEL/TOL concentrations > 2 mg/kg in soil; 3) filing a deed notice for benzo(a)pyrene (BAP) concentrations < 10 mg/kg and > 0.66 mg/kg: 4) continue LRMs for groundwater; 5) ISCO treatment for benzene concentrations >100 ug/L in groundwater; supplemented by enhanced bioremediation, if necessary, until all the LNAPL is removed to the extent practicable; 6) in-situ geochemical for arsenic groundwater concentration> 60 ug/L using direct injection and/or reactive barrier wall; and 7) MNA and file a CEA for groundwater.

SWMU No. 9 is a suspected TEL Burial Area (East Yard - north-northwest corner of Tank 753 basin). The analytical results for the 10 samples collected from SWMU 9 showed that no constituents were present in excess of the applicable NRDCSCC and NRDCSRS. Groundwater modeling of PCOCs within this SWMU demonstrated no exceedances. Additionally, no LNAPL is present within this SWMU. Based on these analyses, it is determined that this SWMU was not used for TEL burial. NFA is proposed.

SWMU No. 10 consists of two TEL sludge burials located to the west of Tank Basin 771 in the East Yard. The corrective measures of the contaminated media are: 1) excavation, ex-situ stabilization and disposal in CAMU for TCLP lead levels >5 mg/l and TEL/TOL concentrations >2 mg/kg in soil; 2) in-situ stabilization for TCLP lead levels <5 mg/L and lead levels >800 mg/kg in soil, and filing a deed notice; 3) filing a deed notice for benzo(a)pyrene (BAP) concentrations < 10 mg/kg and > 0.66 mg/kgz; 4) containment consisting of a cap with filing a deed notice afterward for arsenic concentrations > 20 mg/kg in surface soil; 5) ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if necessary; 6) in-situ geochemical stabilization for arsenic groundwater concentration> 60 ug/L using direct injection and/or reactive barrier wall; and 7) MNA and file a CEA for groundwater.

SWMU No. 11A consists of 3 TEL Burial Areas (State Street Parking Lot - three areas alongside Central Railroad of New Jersey [now Conrail] right-of-way); Ten soil samples were collected at SWMU 11A. Lead was detected above the NRDCSRS in analysis of one soil sample at a concentration of 1,820 mg/kg. Benzo(a)pyrene (3.1 mg/kg) was detected in one surficial soil sample above the NRDCSCC. No exceedances of the GWQS were found. The corrective measures are: 1) in-situ stabilization for lead in soil and filing a deed notice; 2) excavation, ex-situ stabilization and disposal in CAMU for TEL concentrations >2 mg/kg in soil; 3) filing a deed notice for benzo(a)pyrene (BAP) concentrations < 10 mg/kg and > 0.66 mg/kg; and 4) NFA (granted in January 21, 2005) for groundwater.

SWMU No. 11B was determined not to have been used for TEL burial, based on the fact that there were no exceedances of the applicable NRDCSCC and NRDCSRS in analytic results and that lead was not detected in the groundwater at this location. The corrective measures are: 1) NFA proposed for soil; 2) continue LRMs for groundwater, until all the LNAPL is removed to the extent practicable, 3) ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if necessary; and 4) MNA and file a CEA for groundwater.

SWMU No. 12 consists of 3 TEL Burial Areas (Main Yard - northwest side of Tank 27 basin). The corrective measures are: 1) excavation, ex-situ stabilization and disposal in CAMU for TEL concentrations >2 mg/kg in soil; 2) in-situ stabilization for lead in soil and filing a deed notice; 3) filing a deed notice for benzo(a)pyrene (BAP) concentrations < 10 mg/kg and > 0.66 mg/kg; and 4) further evaluation for groundwater.

SWMU No. 13 consists of a TEL Burial Area (Main Yard - west side of Tank 28 basin). Based on the fact that there were no exceedances of the applicable NRDCSCC and NRDCSRS in any of analytic results of soil samples, and that lead was not detected in the groundwater at this location, it has been determined that this location was not used for disposal of TEL wastes. NFA is proposed for both soil and groundwater.

SWMU No. 14 consists of 2 TEL Burial Areas (Main Yard - southeast side of Tank 23 basin). No COCs were detected above the applicable NRDCSCC and NRDCSRS in soil or the GWQS in groundwater at this SWMU. NFA is proposed and granted for both soil and groundwater.

SWMU No. 15 consists of a TEL Burial Area (Main Yard - south side of Tank 14 basin). The corrective measures are: 1) excavation, ex-situ stabilization, and disposal in the CAMU for benzo(a)pyrene (BAP) concentrations >10mg/kg in soil; and 2) MNA and file a CEA for groundwater.

SWMU No. 16 consists of a 20-foot by 20-foot TEL sludge burial located in the eastern portion of Tank Basin 306 in the North Field. The corrective measures for the contaminated media are: 1) ISCO treatment for organic contamination in soil, supplemented by enhanced bioremediation, if necessary; 2) excavation, ex-situ stabilization and disposal in the CAMU for TOL concentrations >2 mg/kg in soil; 3) filing a deed notice for benzo(a)pyrene (BAP) concentrations < 10 mg/kg and > 0.66 mg/kg; 4) containment consisting of a cap with filing a deed notice afterward for arsenic concentrations > 20 mg/kg in surface soil; 5) ISCO treatment for benzene concentrations >100 ug/L in groundwater; 6) in-situ geochemical stabilization for arsenic groundwater concentration > 60 ug/L using direct injection and/or reactive barrier wall; and 7) MNA and file a CEA for groundwater.

SWMU No.17 consists of a 40-foot by 40-foot TEL sludge burial located in the eastern portion of Tank Basin 301 in the North Field. The corrective measures for the contaminated media are: 1) ISCO treatment for organic contamination in soil, supplemented by enhanced bioremediation, if necessary; 2) excavation, ex-situ stabilization and disposal in CAMU for lead in soil and TEL/TOL concentrations >2 mg/kg in soil; 3) filing a deed notice for benzo(a)pyrene (BAP) concentrations < 10 mg/kg and > 0.66 mg/kg; 4) ISCO treatment, supplemented by enhanced bioremediation, if necessary, for benzene concentrations >100 ug/L in groundwater; and 5) MNA and file a CEA for groundwater.

SWMU No.18 consists of a 20-foot by 20-foot TEL sludge burial located in the western portion of Tank Basin 301 in the North Field. The corrective measures for the contaminated media are: 1) ISCO treatment for organic contamination in soil, supplemented by enhanced bioremediation, if necessary; 2) in-situ stabilization for lead in soil and file deed notice; 3) excavation, ex-situ stabilization and disposal in the CAMU for TOL concentrations >2 mg/kg in soil; 4) ISCO treatment for benzene concentrations >100 ug/L in groundwater supplemented by enhanced bioremediation, if necessary; and 5) MNA and file a CEA for groundwater.

SWMU No. 19 consists of a 20-foot by 20-foot TEL sludge burial located to the west of Tank 326 in the North Field. The corrective measures for the contaminated media are: 1) ISCO treatment for organic contamination in soil, supplemented by enhanced bioremediation, if necessary; 2) excavation, ex-situ stabilization and disposal in the CAMU for benzo(a)pyrene concentrations >10 mg/kg and TEL concentrations >2 mg/kg in soil; 3) containment consisting of a cap with filing a deed notice afterward for arsenic concentrations > 20 mg/kg in surface soil; and 4) MNA and file a CEA for groundwater.

SWMU No. 20 consists of a TEL burial area located east of Tank 302 in the North Field. The corrective measures for the contaminated media are: 1) excavation, ex-situ stabilization and disposal in the CAMU for TCLP lead levels >5 mg/L and TOL concentrations > 2mg/kg in soil; 2) in-situ stabilization for TCLP lead levels <5 mg/L and lead levels >800 mg/kg in soil and filing a deed notice; 3) containment consisting of a cap with filing a deed notice afterward for arsenic concentrations >20 mg/kg in surface soils; 4) ISCO treatment for benzene concentrations 100 ug/L in groundwater, supplemented by enhanced bioremediation, if necessary; and 5) MNA and file a CEA for groundwater.

SWMU No. 21 consists of a 20-foot by 20-foot TEL sludge burial located at the Mudflats in the North Field. The corrective measures for the contaminated media are: 1) ISCO treatment for organic contaminants in soil supplemented by enhanced bioremediation, if necessary; 2) in-situ stabilization for lead in soil, installing a non-RCRA cap, and filing a deed notice; and 3) MNA and file a CEA for groundwater.

SWMU 22 consists of a 20-foot by 20-foot TEL sludge burial located in the eastern portion of what was Tank Basin 329 in the North Field. The corrective measures are: 1) excavation, ex-situ stabilization and disposal in the CAMU for TOL concentrations >2 mg/kg in soil; 2) filing a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg in soil; and 3) MNA and file a CEA for groundwater.

SWMU No. 24 consists of two TEL weathering areas located north of Tank 306 (east of Tank 9209), at the south end of the ETP. The corrective measures for the contaminated media are: 1) ISCO treatment for organic contaminants in soil supplemented by enhanced bioremediation, if necessary; 2) excavation, ex-situ stabilization and disposal in the CAMU for TEL concentrations >2 mg/kg in soil; 3) containment consisting of a cap with filing a deed notice afterward for arsenic concentrations >20 mg/kg in surface soils; 4) filing a deed notice afterward for BAP concentrations < 10 mg/kg > 0.66 mg/kg; and 5) MNA and file a CEA for groundwater.

SWMU No. 25 consists of a TEL weathering area located north of East Yard Basin in the East Yard. There were no exceedances of applicable NRDCSCC and NRDCSRS in any analytic results of soil samples or the GWQS of the groundwater samples. NFA is proposed for both soil and groundwater.

SWMU No. 26 consists of the TEL Weathering Area south of the East Yard Basin. The corrective measures are: 1) excavation, ex-situ stabilization and disposal in CAMU for TOL concentrations >2 mg/kg in soil; 2) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; 3) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 4) in-situ geochemical stabilization for arsenic groundwater concentrations >60 ug/L using direct injection and/or reactive barrier wall; and 5) MNA and file a CEA for groundwater.

SWMU No. 27 consists of a TEL burial area located north of Tank 312, west of North Field Basin (NFB) Yard. The corrective measures for the contaminated media are: 1) excavation, ex-situ stabilization and disposal in CAMU for BAP concentrations >10 mg/kg and TEL concentrations >2 mg/kg in soil; 2) in-situ stabilization for lead in soil and file a deed notice afterwards; 3) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 4) file a deed notice for soils with BAP concentrations <10 mg/kg and >0.66 mg/kg; and 5) NFA is proposed for groundwater.

SWMU No. 28 consists of the Reactor Burial Site. In the early 1960's, there was an explosion and fire in the area producing phthalic anhydride. After the fire, a reactor tank used for the production was determined to be useless and was buried. The burial area is located near the Short Term Storage Area (SWMU 30). The corrective measures are: 1) further investigation of phthalic anhydride reactor area soil; 2) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 3) NFA proposed for groundwater.

SWMU No. 29 is the location of the former spent catalytic (cat) cracker. The fluid-cracking catalyst material was staged, loaded and transferred in this area. The corrective measures for the contaminated media are: 1) excavation, ex-situ stabilization and disposal in CAMU for TOL concentrations >2 mg/kg in soil; 2) in-situ stabilization for lead in soil and file a deed notice afterwards; 3) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; 4) in-situ geochemical stabilization for arsenic groundwater concentrations >60 ug/L using direct injection and/or reactive barrier wall; and 5) MNA and file a CEA for groundwater.

SWMU No. 30 consists of the area located along the western edge of the North Field and is used for the temporary (less than 90 days) storage of hazardous and potentially hazardous waste. It was identified as a solid waste management unit based on potential releases that might have included small volume leaks and spills from the 55-gallon drums

and dumpsters stored in this area. The corrective measures for the contaminated media are: 1) filing of a deed notice for benzo(a)pyrene (BAP) concentrations <10 mg/kg and >0.66 mg/kg; and 2) NFA proposed for groundwater.

SWMU No. 31 consists of the Effluent Treatment Plant (ETP). The ETP was in operation since 1977 until process operations ended to provide treatment to process waste or wastewater generated from the process areas and to recover recyclable material before discharge of treated wastewater to Woodbridge Creek. The treatment units utilized included an Induced Air Floatation (IAF) Unit, an Equalization Tank, a Rotating Biological Contactors System, Clarifier Tanks and a Post-aeration Tank. The corrective measures are: 1) in-situ stabilization for lead in soil and file a deed notice afterwards; 2) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 3) NFA is proposed for groundwater.

SWMU No. 32 consists of the former PCB Waste Storage Building. The unit was located in the warehouse in the East Yard area. Limited amounts of PCBs were generated when transformers were cleaned. None of the 27 wipe samples collected and analyzed for PCBs showed concentrations of PCBs that require further action. NFA is proposed for both soil and groundwater.

SWMU No. 34 consists of the Dumpster Area and ditches. In 1983, a leaking dumpster was observed in the Central Yard area. The dumpster contained a catalyst from the Sulfur Recovery Unit. The spill was collected by absorbants. There were two drainage ditches near the Dumpster Area. One flowed along the southern side of the Dumpster Area and the other flowed along the western side of the Dumpster Area. The corrective measures are: 1) excavation, ex-situ stabilization and disposal in CAMU for TCLP lead levels >5 mg/L and benzo(a)pyrene concentrations >10 mg/kg in soil; 2) in-situ stabilization for TCLP lead levels <5 mg/L and lead levels >800 mg/kg in soil, as well as lead concentrations >50 ug/L in groundwater, and file a deed notice afterwards; 3) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 4) file a deed notice for soils with benzo(a)pyrene concentrations <10 mg/kg and >0.66 mg/kg; and 5) MNA and file a CEA for groundwater.

SWMU No. 35 consists of the No. 4 separator impoundment. The unit was a surface impoundment used for oil/water separation. The unit is located west of the ETP and between Tanks 327 and 330. The corrective measures are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 3) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; 4) ISCO treatment for benzene

concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if required; and 5) MNA and file a CEA for groundwater.

SWMU No. 36 is an earthen impoundment used for oil/water separation, located between the East Yard Basin (SWMU 3) and the Arthur Kill. The impoundment measured approximately 200 feet long by 120 feet wide with an associated feeder ditch along the south side. The unit discharged to the Arthur Kill and was operational from the late 1940's to 1974. No records are available and usage pre-dated refinery release records. The corrective measures for the contaminated media are: 1) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 2) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 3) NFA is proposed for groundwater.

SWMU No. 38 consists of the area located in the northwest section of the North Field and which partially overlaps the northern end of SWMU 30. SWMU 38 was an open earthen impoundment that was identified on aerial photographs dated from 1947 to 1954. The type of waste SWMU 38 contained is unknown. The original unit was roughly elliptical in shape, measuring approximately 75 feet by 250 feet along its minor and major axes. However, the investigation area was expanded to a 125 foot by 250 foot rectangle to account for irregularities in the shape of the unit. The corrective measures for the contaminated media are: 1) excavation, ex-situ stabilization and disposal in CAMU for BAP concentrations >10 mg/kg in soil; 2) file a deed notice for soils with benzo(a)pyrene concentrations >0.66 mg/kg; and 3) NFA for groundwater granted on January 21, 2005.

SWMU No. 39 consists of an unnamed North Field Pond, which is an irregularly shaped area visible in several aerial photographs. This area was reportedly used as a landfarm for tank bottoms sludge (non-leaded) in the late 1960's. The corrective measures for the contaminated media are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 3) in-situ stabilization for lead in soil and file a deed notice afterwards; 4) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 5) further evaluation of the groundwater.

SWMU No. 40 is a former surface impoundment that was used to manage process water and storm water located near Tank 306. This impoundment was operational prior to 1940 through approximately 1967, and possibly to 1974. An oil/water separator was used in conjunction with the Old Pond. The oil/water separator recovered oil in a rectangular box and suspended solids settled in the pond. The pond was nearly circular with a diameter of approximately 175 feet. Tank 306 is currently in service for storage of sodium hydrosulfide (NaHS), and has historically held gasoline products. Minor

amounts of LNAPL were found at three isolated locations in SWMU 40, approximately 60 feet apart. LNAPL is found primarily in lenses of highly porous and permeable catalyst beads that are contained within the low permeability clay fill. The corrective measures for the contaminated media are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) excavation, ex-situ stabilization and disposal in CAMU for BAP concentrations >10 mg/kg in soil; 3) in-situ geochemical stabilization for arsenic groundwater concentrations >60 ug/L using direct injection and/or reactive barrier wall; and 4) MNA and file a CEA for groundwater.

SWMU No. 41 consists of a 200 foot by 400-foot bermed, at-grade impoundment located in the North Field along Woodbridge Creek. The unit is a sludge drying area that appears in aerial photographs dating from 1952 through 1967, and appears in a 1974 aerial photograph. Presently, the area is occupied by the ETP. Gravel surface surrounds the ETP structures. Several pipes run between the structures that prevent accessibility to some portions of the unit. SWMU 41 may have been used for storage of oily sludges and may be the source of LNAPL within this area. LNAPL was encountered in temporary well point HP-0081 along the northern edge of ETP Tank 9200 within SWMU 41 and area was identified a LNAPL area. The corrective measures for the contaminated media are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) in-situ stabilization for lead in soil; 3) file a deed notice for BAP <10 mg/kg and >0.66 mg/kg; 4) a cap for arsenic in soil >20 mg/kg; and 5) MNA and file a CEA for groundwater.

SWMU No. 42 consists of a crude concrete slab of approximately 25,000 square feet, slightly below grade, that supports a mostly above ground network of petroleum pipeways that have been in operation since 1973. There have been historic spills/releases. Of particular note was a 420 gallon heavy oil discharge from a failed 12 inch diameter pipeline that was removed and disposed of off-site. Some product was released into the adjacent soil. AST 750, located just southeast of SWMU 42 historically stored gas and naphtha. In addition, Bulk Station Gasoline Pumps were located south of SWMU 42. This area is now considered PAOC 20 and is part of SWMU 42 and its associated LNAPL area. The SWMU 42 LNAPL area is bounded by the AOC 16 Investigation Area EY1 LNAPL Area and the East Yard Crude Slab to the north, Tank 750 to the east, the Bulk Station Gasoline Pump to the south, and the vacant Administration Building to the west. The LNAPL plume associated with SWMU 42 covers approximately 25,000 square feet at a thickness ranging from <0.01 feet to 0.3 feet. The area was first identified in 2001 during the first-phase RFI when LNAPL was noted in a temporary well point. Odors and staining were observed in the fill in the majority of the temporary piezometers installed in SWMU 42. The corrective measures for the contaminated media are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) in-situ stabilization for TCLP lead levels <5 mg/L and lead levels >800 mg/kg in soil, as well as lead concentrations

>50 ug/L in groundwater, and file a deed notice afterwards; 3) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; 4) ISCO treatment for benzene concentrations >100 ug/L in groundwater supplemented by enhanced bioremediation, if required; and 5) MNA and file a CEA for groundwater.

SWMU No. 43 consists of a below grade surface impoundment that was in operation between 1955 and 1975. The specific wastes managed in the unit are unknown. Dredged material from the Surge Pond (SWMU 2), the No. 4 Separator (SWMU 35) and Old Pond (SWMU 40) may have been placed in this unit in late 1956 or early 1957. Also, the area appears designed to manage oily stormwater and process water. SWMU 43 was also used as a spent catalyst disposal area in the mid-1950s. During the course of its usage, SWMU 43 received RCRA-listed hazardous wastes F037, F038, K051, and K052. The impoundment was taken out of service and filled in 1977. SWMU 43 is approximately 61,974 square feet where two former waste ponds once existed beneath the existing concrete pad and beyond. Historical photos show the presence of an earthen wall that surrounds and separates the mudflats into two ponds. The SWMU 43 LNAPL Area is the result of different sludge disposal activities at SWMU 43. These sludges may have originated from the oil water sewer system, tank bottoms, and other sources. Based on laboratory analysis, the LNAPL is a mixture of crude oil, gasoline, and diesel. The corrective measures for the contaminated media are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) in-situ stabilization for lead in soil, install a non-RCRA cap, and file a deed notice afterwards; 3) continue LRMs for groundwater, until all the LNAPL is removed to the extent practicable; and 4) MNA and file a CEA for groundwater.

SWMU No. 44 is located in the Main Yard, under the present position of the utility plant and control house and various pipe trenches. The location and size of the unit are based upon aerial photographs, which show the unit to be approximately 245 feet long by 200 feet wide at the narrow end, and 350 feet wide at the wider end. It appears to be a below grade earthen impoundment that may have been used for the management of process water and stormwater. The impoundment operated from prior to 1932 to 1950. The waste products are oily process water and stormwater. The corrective measures are: 1) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 2) NFA is proposed and granted for groundwater.

SWMU No. 45, also called the "Kidney Pond", is a below grade earthen impoundment of approximately 150 feet by 50 feet with a partial dike in the middle. SWMU 45 was constructed sometime in the mid-1950s and was shut down between 1974 and 1977. Operational history is unknown and predates release records but the impoundment probably handled oil/sludges from the OWS (SWMU 36) or its associated ditch. Historic waste volumes are unknown. SWMU 45 has been grouped with SWMU 3 (East Yard Basin), which has been closed under NJDEP supervision, and is being monitored by

NJDEP (see SWMU 3 discussion). Chevron is currently performing groundwater monitoring of the closure wells, and is in the process of filing a deed notice with conditional NFA. Post closure care will be implemented under a Remedial Action permit to be issued by NJDEP.

SWMU No. 51 was constructed in 1990 and consists of an Oily Soil Pad. This unit is an asphalt pad located in the Main Yard south of Tank 311. This unit is used for the temporary staging of non-hazardous soil excavated as the result of onsite spill responses, or that is encountered during onsite construction and demolition activities. The unit is underlain by a polyethylene liner and equipped with a valve accessed catch basin for the collection and control of stormwater. The catch basin drains to the oily water sewer system. It has been determined that no hazardous wastes are managed at the SWMU. NFA is proposed and granted for groundwater. Further evaluation of soil is still necessary.

SWMU No. 52 is a potential TEL Burial Area Southwest of Tank 13. Since there were no exceedances of the applicable NRDCSCC and NRDCSRS in any analytic results of soil samples, it does not appear that this location was used for disposal of TEL wastes. Therefore, no further action for soils at SWMU 52 was recommended in the November 2003 RFI Report. Groundwater conditions at SWMU 52 were investigated during the CMS and showed no exceedances. Additionally, no LNAPL is present within this SWMU. NFA is proposed for both soil and groundwater.

SWMU 53 consists of the area located to the south and east of the concrete splash pad of Tank Basin 312 in the North Field and was identified as a solid waste management unit based on training fires set in the Fire Fighting Training Grounds (FFTG). The FFTG were fueled with naphtha, which may have become entrained in the water used to extinguish the fires. The naphtha-laced water was drained and discharged into Tank Basin 312, then to the OWSS and to the ETP for treatment. The corrective measures for contaminated media are: 1) filing a deed notice for BAP concentrations < 10 mg/kg and > 0.66 mg/kg in soil; and 2) NFA is proposed for groundwater.

2. AREAS OF CONCERN-AOCs

AOC No. 1 consists of a potential discharge from Tank 1, which is located in the Main Yard immediately north of Maurer Road. Tank 1 was dismantled in 2002. During the demolition of Tank 1, petroleum stained soils were identified under the northern half of Tank 1. Approximately 330 cubic yards of impacted soil were removed. Post-excavation samples were collected following remedial action activities. Sample analysis detected arsenic in one of the post-excavation samples at a concentration of 22.1 mg/kg, above the NRDCSCC. Analysis of additional groundwater samples collected at MW-133 showed benzene levels below the method detection limit (0.5 ug/L). Additional sampling and

analysis is necessary to determine whether NFA is achieved. If additional remediation is needed for this AOC, the permittee will use any appropriate remedial methods approved in this permit for other parts of the site to achieve the cleanup levels.

AOC No. 2 consists of a potential discharge from Tank 3, located in the Main Yard immediately north of Maurer Road. During demolition of Tank 3, stained soils were noted beneath the northern portion of the tank floor. Approximately 600 cubic yards of stained soils and rail ties were excavated from this area. Petroleum impacted soils were remediated using excavation and off-site disposal. No exceedances of the applicable regulatory criteria/standards were identified in analyses of post excavation soil and groundwater samples. NFA is proposed for both soil and groundwater.

AOC No. 3 consists of a potential discharge from Tank 4. Slightly higher and sporadic exceedences of benzo(a)pyrene were observed in soil. Additional sampling and analysis, and soil removal are necessary to determine whether NFA is achieved. If additional remediation is needed for this AOC, the permittee will use any appropriate remedial methods approved in this permit for other parts of the site to achieve the cleanup levels.

AOC No. 5 was identified during the excavation of the UGST E3, when the Permittee observed a petroleum substance. The petroleum substance appeared to be related to material observed near Well MW-13. The corrective measures are: 1) in-situ stabilization for lead in soil and file a deed notice afterwards; 2) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 3) further evaluation of the groundwater.

AOC No. 6A contains oily petroleum material observed at borings B-26 and B-34 and at piezometer P-2. During field activities in 1991 for installing groundwater monitoring wells and piezometers, petroleum material was observed at eight borings. The corrective measures at AOC 6A are: 1) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; 2) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; and 3) further evaluation of the groundwater.

AOC No. 6B was identified during field activities between September through October 1991 while installing groundwater monitoring wells and piezometers. Petroleum material was observed at eight borings. The corrective measures are: 1) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; and 2) further evaluation of the groundwater.

AOC No. 6C was identified during field activities between September through October 1991 while installing groundwater monitoring wells and piezometers. Petroleum material was observed at two borings. The corrective measures are: 1) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; and 2) further evaluation of the groundwater.

AOC No. 7 consists of tar-like material detected at groundwater monitoring well MW-13. Based on soil and groundwater modeling of PCOC, no exceedences were demonstrated. The corrective measures are further evaluation of the soil and groundwater.

AOC No. 8 consists of oily and tar-like material detected at borings B-27 and B-28. The Permittee notified NJDEP. The corrective measures are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if required; and 3) MNA and file a CEA for groundwater.

AOC No. 9A consists of contamination detected at groundwater monitoring well NF-10. The corrective measures are: 1) NFA for soil; 2) ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if required; and 3) MNA and file a CEA for groundwater.

AOC No. 9B consists of contamination detected at groundwater monitoring well NF-11. The Permittee notified NJDEP of the detection of volatile organic compounds. The corrective measures are: 1) NFA for soil; and 2) MNA and filing a CEA for groundwater.

AOC No. 10 consists of stained soil and gravel observed during the visual site inspection (VSI) in the area of the IAF tank, Tank 723. In 1989, the Permittee extended the concrete pad below Tank 723. Soil and gravel were removed to depths ranging from 10 to 20 inches, including all visibly stained soil and gravel. The corrective measures are: 1) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 2) NFA is proposed for groundwater.

AOC No. 13 consists of the B-11 Oily Fill Area (GWQAP Area 1). This area is based on oily fill material identified in a soil boring located in the East Yard. The corrective measures are: 1) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 2) further evaluation of the groundwater.

AOC No. 14 consists of GWQAP Oily Fill Area III. Oily fill was observed in soil borings B-9, B-10, B-12, B-17, B-18 and B-19 in the East Yard. The corrective measures are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) containment consisting of a cap with filing a deed notice

afterwards for arsenic concentrations >20 mg/kg in surface soil; 3) in-situ stabilization for lead in soil and file a deed notice afterwards; 4) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; 5) in-situ geochemical stabilization for arsenic groundwater concentrations >60 ug/L using direct injection and/or reactive barrier wall; and 6) MNA and file a CEA for groundwater.

AOC No. 15 consists of an oil release at Buckeye Pipeline Manifold. An unknown quantity of oil was released at the location of the Buckeye pipeline manifold at the corner of Creek and Barber Streets. Some oil was recovered. Reports indicate that oil is present on the surface of water that collects in a gravel filled area in the vicinity of the release. The corrective measures are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if required; 3) and MNA and file a CEA for groundwater.

AOC No. 16A in the Main Yard consists of the Oily Water Sewer System (OWSS). The OWSS was used to convey process waste and waste waters generated from process areas to the ETP (SWMU No. 31). The OWSS extends throughout the previously active areas of the refinery and was integral to its operations. The corrective measure are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) excavation, ex-situ stabilization and disposal in CAMU for BAP concentrations >10 mg/kg; 3) in-situ stabilization for lead in soil and file a deed notice afterwards; 4) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 5) ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if required; and 6) MNA and file a CEA for groundwater.

AOC No. 16B is the East Yard area. The corrective measures are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) excavation, ex-situ stabilization and disposal in CAMU for BAP concentrations >10 mg/kg and TCLP lead levels > 5 mg/L in soil; 3) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 4) in-situ stabilization for TCLP lead levels <5 mg/L and lead levels >800 mg/kg in soil, as well as lead concentrations >50 ug/L, and file a deed notice afterwards; 5) ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if required; 6) in-situ geochemical stabilization for arsenic groundwater concentrations >60 ug/L using direct injection and/or reactive barrier wall; and 7) MNA and file a CEA for groundwater.

AOC No. 16C is the Central Yard. The corrective measures are 1) file a deed notice for soils with BAP concentrations <10 mg/kg and >0.66 mg/kg; 2) excavation, ex-situ stabilization and disposal in CAMU for BAP concentrations >10 mg/kg in soil; 3) ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if required; and 4) MNA and file a CEA for groundwater.

AOC 17 consists of Tank Basin 20 located in the Main Yard. The area was identified as an AOC based on an EPA site visit in August 1994 and subsequent Chevron notification concerning possible contamination, dated September 19, 1994. The corrective measures are: 1) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 2) further evaluation of the groundwater.

AOC 18 consists of Tank Basin 2 located in the Main Yard. The area was identified as an AOC based on the observation of petroleum impacted soils during the demolition of Tank 2. Petroleum impacted soils were remediated using excavation and off-site disposal. Analysis of post excavation soil samples collected at AOC 18 showed no exceedances of the applicable regulatory criteria/standards. Groundwater modeling of PCOCs within this AOC demonstrated no exceedances of the GWQS. NFA is proposed for both soil and groundwater.

AOC 19 consists of the above ground product pipeway located in the Main Yard. The area was identified as an AOC due to the identification of oil stained soil in the pipeway containment earthen trench. A LNAPL area is located in the eastern portion of this AOC. The corrective measures are: 1) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; 2) continue LRMs for groundwater; and 3) further evaluation of the groundwater.

AOC 21 is located near the corner of Maurer Road and State Street, adjacent to the former Bulk Station. The area was identified as an AOC based on the identification of potentially contaminated soil encountered during excavation to locate and repair a leak in the Refinery Fire Water System. Analytical data from soil samples showed no exceedances of the applicable NRDCSCC and NRDCSRS. Soil is therefore not a source of contamination to groundwater or to human and environmental receptors. Analyses of groundwater samples collected from temporary well points showed no exceedances of the GWQS, and analyses of groundwater samples from permanent monitoring well A21TP1 show no consistent exceedances of the GWQS. NFA is proposed for both soil and groundwater.

AOC 22 is located south of the Shops Building in the Central Yard. The area was identified as an AOC based on groundwater contamination identified during the removal of an underground storage tank in December 1995. The corrective measures are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced

bioremediation, if required; 2) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; 3) ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if required; and 4) MNA and file a CEA for groundwater.

AOC 23 consists of Tank Basin 327 in the North Field. The area was identified as an AOC in 1996 when petroleum impacted soil and groundwater were observed in excavation pits while Chevron was installing foundations for above ground piping. The corrective measures are: 1) excavation, ex-situ stabilization and disposal in CAMU for TCLP lead levels > 5 mg/L and TOL concentrations >2 mg/kg in soil; 2) in-situ stabilization for TCLP lead levels <5 mg/L and lead levels >800 mg/kg in soil and file a deed notice afterwards; 3) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 4) ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if required; and 5) MNA and file a CEA for groundwater.

AOC 24 is located northwest of Tank 4 in the Main Yard. The area was identified as an AOC based on a small localized area of petroleum contaminated soil that was identified at the fire hydrant located in this area. No exceedances of the applicable criteria were detected in analytic results of soil samples. The corrective measures are: 1) further evaluation of soil data is necessary; and 2) NFA for groundwater which was granted on January 21, 2005.

AOC 25 consists of a release at the location of the former cat cracker in the Central Yard. This AOC is a confirmed LNAPL area. The corrective measures are: 1) continue LRMs for groundwater, until all the LNAPL is removed to the extent practicable; 2) ISCO or enhanced bioremediation for benzene concentrations are greater than 100 ppb; 3) MNA and file a CEA for groundwater; and 4) NFA is proposed for soil.

AOC 26 consists of the East Yard Bunker Slab located in the East Yard within the footprint of the EY4b LNAPL area. The corrective measures are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; 3) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; and 4) NFA is proposed for groundwater.

AOC 27 consists of an above ground product pipeway located within Tank Basin 777 in the East Yard. The area was identified as an AOC in October 1998 during a cleanup effort related to a No. 2 fuel oil release. The corrective measures are: 1) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; and 2) further evaluation of the groundwater.

AOC 28 is located in the footprint of former Tank 719 in the East Yard. It was designated as an LNAPL area after LNAPL was detected in a temporary well point installed during the 1st-Phase groundwater investigation. The corrective measures are: 1) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 2) NFA for groundwater which was granted on January 21, 2005.

AOC 29 is located in the 5 Berth Area in the East Yard, which was identified as an AOC based on the presence of solid asphalt-like material and LNAPL in the area. This AOC is a confirmed LNAPL area. The corrective measures are: 1) excavation, ex-situ stabilization and disposal in the CAMU for BAP concentrations >10 mg/kg in soil, followed by completion of a revetment system at the former 5 Berth area; and 2) filing of a deed notice.

AOC 30 consists of the Tank 27 pipeway located in the Central Yard. This area was identified as an AOC due to the observance of stained soils in the area. Petroleum impacted soils have been removed from AOC 30, and post excavation sampling analytic results showed no exceedances of the applicable NRDCSCC and NRDCSRS. Analyses of samples collected from MW-130 have shown no exceedances of the GWQS for VOCs and SVOCs, and intermittent exceedances for metals. NFA is proposed and granted for both soil and groundwater.

AOC 31 is located in the vicinity of a former pump within Tank Basin 772 in the East Yard. The area was identified as an AOC when stained soils were observed during re-grading activities conducted within the tank basin. This AOC is a confirmed LNAPL area. The corrective measures are: 1) electrical resistance heating (ERH) and soil vapor extraction (SVE) for organic contaminants in soil, contaminated groundwater and LNAPL; 2) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 3) in-situ stabilization for lead in soil and file a deed notice afterwards; and 4) ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if required, until all the LNAPL is removed to the extent practicable.

AOC 32 consists of Tank Basin 16 located in the Central Yard. There were no exceedances of the applicable regulatory soil criteria/standards in any of the analytic results of soil samples. Soils are not a source of contamination to groundwater or human and other environmental receptors. Groundwater modeling of PCOCs within AOC 32 demonstrated no exceedances. NFA is proposed for both soil and groundwater.

AOC 33 consists of Tank Basin 314 located in the Main Yard. The area was identified as an AOC in 2000 based on an apparent release from a leak in the tank. The corrective measures are: 1) in-situ stabilization for lead in soil and file a deed notice afterwards

2) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 3) MNA and file a CEA for groundwater.

AOC 34 consists of Tank Basin 315 located in the Main Yard. The area was identified as an AOC in 2000 based on an apparent release noted in inspection records. The corrective measures are: 1) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; and 2) further evaluation of the groundwater.

AOC 35 consists of Tank Basin 771 located in the East Yard. Tank 771 is constructed of welded steel rings with a steel bottom plate. Tank 771 has a diameter of 150 feet, a height of 48 feet, and a capacity of 150,000 bbls. Tank 771 has been used to store crude oil. With the exception of two slight exceedances of arsenic in soil, there are no exceedances of the applicable NRDCSCC and NRDCSCS. There have been no impacts to groundwater in the vicinity of AOC 35. The corrective measures are: 1) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; and 2) NFA is proposed and granted for groundwater. Further evaluation of soil is still necessary.

AOC 36 is located in the southern portion of the Central Yard. The area was identified as an AOC based on the detection of chlorinated hydrocarbons in groundwater during the RFI. The corrective measures are: 1) enhanced in-situ bioremediation including bioaugmentation for 1,1-DCE and TCE greater than 100 ug/L in on-site groundwater; 2) in-situ geochemical stabilization for arsenic groundwater concentrations >60 ug/L using direct injection and/or reactive barrier wall; and 3) MNA and file a CEA for groundwater.

AOC 37 is located at the East Yard Gasoline Filters. The area was identified as an AOC based on the results of a Potential Area of Concern (PAOC) site investigation conducted in December 2002. The corrective measures are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) in-situ stabilization for lead in soil and file a deed notice afterwards; and 3) further evaluation of the groundwater.

AOC 38 is located at the barge loading manifold and the G180/181 naphthapumps in the East Yard. The area was identified as an AOC based on the results of a PAOC site investigation conducted in November, 2002. The corrective measures are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 3) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 4) further evaluation of the groundwater.

AOC 39 is located at the former East Yard Pump House and the PRC Loading Rack in the East Yard. The area was identified as an AOC based on the results of a PAOC site investigation conducted in December, 2002. The corrective measures are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; and 3) further evaluation of the groundwater.

AOC 40 is located at Tank Basin 22 in the Central Yard. The area was identified as an AOC based on the results of a PAOC site investigation conducted in November 2002. The corrective measures are: 1) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; 2) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; and 3) further evaluation of the groundwater.

AOC 41 is located at Tank Basin 300 in the North Field. The area was identified as an AOC based on the results of a PAOC site investigation of the area conducted in May, 2003. The corrective measures are: 1) ISCO treatment for benzene in soil, supplemented by enhanced bioremediation, if required; 2) in-situ stabilization for lead in soil and file a deed notice afterwards; 3) excavation, ex-situ stabilization and disposal in CAMU for TEL concentrations >2 mg/kg in soil; 4) ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if required, until all the LNAPL is removed to the extent practicable; and 5) MNA and file a CEA for groundwater.

AOC 42 is located at Tank Basin 310 in the Main Yard. The area was identified as an AOC based on the results of a PAOC site investigation conducted in December 2002. Soil and groundwater modeling demonstrated no exceedances. Additional sampling and analysis is necessary to determine whether NFA is achieved.

AOC 43 is located at Tank Basin 311 in the Main Yard. The area was identified as an AOC based on the results of a PAOC site investigation conducted in December 2002. The corrective measures are: 1) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 2) NFA is proposed for groundwater.

AOC 44 is located at Tank Basin 313 in the North Field. The area was identified as an AOC based on the results of a PAOC site investigation of the area conducted in November 2002. The corrective measures are: 1) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; 2) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 3) continue LRMs for groundwater; 4) ISCO treatment for benzene concentrations >100

ug/L in groundwater, supplemented by enhanced bioremediation, if required; and 5) MNA and file a CEA for groundwater.

AOC 45 is located at Tank Basin 748 in the East Yard. The area was identified as an AOC based on the results of a PAOC site investigation conducted in November 2002. The corrective measures are: 1) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 2) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 3) further evaluation of the groundwater.

AOC 46 is located at Tank Basins 749 and 780 in the East Yard. The area was identified as an AOC based on the results of a PAOC site investigation conducted in November 2002. The corrective measures are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) excavation, ex-situ stabilization and disposal in CAMU for TCLP lead levels > 5 mg/L; 3) in-situ stabilization for TCLP lead levels <5 mg/L and lead levels >800 mg/kg in soil and file a deed notice afterwards; 4) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 5) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 6) further evaluation of the groundwater.

AOC 47 is located at the former No. 4 Crude Unit in the Main Yard. The area was identified as an AOC based on the results of a PAOC site investigation conducted in November 2002. The corrective measures are: 1) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; 2) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; and 3) further evaluation of the groundwater.

AOC 48 is located at the former Isomax Process Plant in the Main Yard. The area was identified as an AOC based on the results of a PAOC site investigation conducted in November 2002. The corrective measures are: 1) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 2) MNA and file a CEA for groundwater.

AOC 49 is located at the former #3 Rheniformer in the Main Yard. The area was identified as an AOC based on the results of a PAOC site investigation conducted in December 2002. The corrective measures are: 1) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; 2) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; and 3) further evaluation of the groundwater.

AOC 50 is an AOC located at the former location of the Bulk Station, which was identified as PAOC 90 in the PAOC investigation initiated in 2002. An RFI investigation is required to characterize the AOC. This AOC will be addressed pursuant to the procedures for Newly Identified AOCs contained in Permit Module III Corrective Action Requirements.

Portion of Woodbridge Creek adjacent to the facility. The permittee completed investigations of surface water and sediments in Woodbridge Creek as part of the RFI. This component of the investigation was reported in the baseline ecological evaluation of the RFI. Completion of the RFI for Woodbridge Creek is required. This AOC will be addressed pursuant to the procedures for Newly Identified AOCs contained in Permit Module III Corrective Action Requirements.

Portion of Spa Spring Creek adjacent to the facility. The permittee completed investigations of surface water and sediments in Spa Spring Creek in the RFI. This component of the investigation was reported in the baseline ecological evaluation of the RFI. Completion of the RFI for Spa Spring Creek is required. This AOC will be addressed pursuant to the procedures for Newly Identified AOCs contained in Permit Module III Corrective Action Requirements.

Portion of the Arthur Kill adjacent to the facility. The permittee completed investigations of surface water and sediments in the Arthur Kill as part of the RFI. This component of the investigation was reported in the baseline ecological evaluation of the RFI. Completion of the RFI is required to characterize the AOC. This AOC will be addressed pursuant to the procedures for Newly Identified AOCs contained in Permit Module III Corrective Action Requirements.

Notes:

1) SWMUs Nos. 4, 23, 33, 37, 54-62, and AOCs 4 and 20 were located in the Amboy Field and West Yard areas. They are not included in Attachment A because remediation was completed under the 1994 Permit. Chevron remains entirely responsible under DEP oversight for implementing institution and engineering control and institutional control under NJDEP's Soil Remedial Action permits. Chevron will continue to address the groundwater issues in Amboy Field and the West Yard Area areas.

2) SWMUs Nos. 46-50 and AOCs 11 and 12 are not included in Attachment A because they are located in the Northern Parcels section of the North Field Extension, which will be subject to remediation by new owners under a RCRA Section 7003 Consent Order to be issued concurrently with this permit renewal.

LIST OF ABBREVIATIONS

AOC	Area of Concern
ASARCO	American Smelting and Refining Company
BAP	Benzo(a)pyrene
bgs	Below Ground Surface
BTEX	Benzene, Toluene, Ethylbenzene, and Xylene
°C	Degrees Celsius
CA	Chloroethane
CAMU	Corrective Action Management Unit
CEA	Classification Exception Area
CFR	Code of Federal Regulations
cm/s	Centimeters per Second
CMS	Corrective Measures Study
COC	Contaminant of Concern
CSIA	Compound Specific Isotope Analysis
CVOC	Chlorinated Volatile Organic Compound
CY	Central Yard
cu yd	Cubic Yard
DAF	Dilution Attenuation Factor
DCA	Dichloroethane
DCE	Dichloroethylene
DNAPL	Dense Non-Aqueous Phase Liquid
DO	Dissolved Oxygen
DOCC	Description of Current Conditions
DPT	Direct Push Technology
DTW	Depth to Water
EAB	Enhanced Aerobic Bioremediation
EDTA	Ethylenediaminetetraacetic Acid
EIB	Enhanced In-situ Bioremediation
ETP	Effluent Treatment Plant
EY	East Yard
°F	Degrees Fahrenheit
FFTG	Fire Fighting Training Ground
FS	Feasibility Study
FR	Fenton's Reagent

GC	Gas Chromatograph
GIS	Geographical Information System
GPS	Global Positioning System
gpm	Gallons Per Minute
GWQS	Groundwater Quality Standard
HDPE	High Density Polyethylene
HFO	Hydrous Ferric Oxide
HSWA	Hazardous and Solid Waste Amendments of 1984
IAF	Induced Air Flotation
IRM	Interim Remedial Measure
ISCO	In-Situ Chemical Oxidation
LDR	Land Disposal Restriction
LEL	Lower Exposure Limit
LNAPL	Light Non Aqueous Phase Liquid
LRM	LNAPL Removal Measure
LTTD	Low Temperature Thermal Desorption
MDL	Method Detection Limit
mg/kg	Milligrams per Kilogram (ppm)
MNA	Monitored Natural Attenuation
MPE	Measuring Point Elevation
MPE	Multiphase Extraction
MTBE	Methyl Tertiary-Butyl Ether
mv	Millivolts
MY	Main Yard
NA	Not Applicable
NAA	No Action Alternative
NAPL	Non Aqueous Phase Liquid
NCP	National Contingency Plan
NF	North Field
NF/MY	North Field/Main Yard
NFA	No Further Action
NFE	North Field Extension
NGVD	National Geodetic Vertical Datum
NJDEP	New Jersey Department of Environmental Protection
NPT	National Pipe Thread
NRDCSCC	Non-Residential Direct Contact Soil Cleanup Criteria
NRDCSCS	Non-Residential Direct Contact Soil Cleanup Standard

O&M	Operation and Maintenance
ORC	Oxygen Releasing Compound
ORP	Oxidation/Reduction Potential
OVM	Organic Vapor Monitor
PAH	Polycyclic Aromatic Hydrocarbon
PAOC	Potential Area of Concern
PCB	Polychlorinated Biphenyl
PCE	Perchloroethylene
PCOC	Principal Contaminant of Concern
PDI	Pre-Design Investigation
PID	Photo Ionization Detector
POTW	Publicly Owned Treatment Works
ppb	Parts Per Billion
PPE	Personal Protective Equipment
ppm	Parts Per Million
PQL	Practical Quantitation Level
psig	Pounds per Square Inch Gauge
PVC	Poly-Vinyl Chloride
QA/QC	Quality Assurance/Quality Control
RAO	Remedial Action Objective
RCRA	Resource Conservation and Recovery Act of 1976
RFI	RCRA Facility Investigation
SCC	Soil Cleanup Criteria
scfm	Standard Cubic Feet per Minute
SMS	Stabilization Measures Status
SOD	Soil Oxidant Demand
SP	Sparge Point
SRFI	Supplemental RFI
S/S	Solidification and Stabilization
SVOC	Semi-Volatile Organic Compound
SWMU	Soil Waste Management Unit
TAL	Target Analyte List
TCA	Trichloroethane
TCE	Trichloroethylene
TCL	Target Constituent List
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total Dissolved Solids

TDU	Thermal Desorption Unit
TEL	Tetra-Ethyl Lead
TIC	Tentatively Identified Compound
TOC	Total Organic Compound
TOL	Total Organic Lead
TOS	Top of Screen
TPH	Total Petroleum Hydrocarbons
TSP	Tri-Sodium Phosphate
TVOC	Total Volatile Organic Compounds
UCS	Unconfined Compressive Strength
ug/L	Micrograms per Liter (ppb)
UGST	Underground Storage Tank
USCS	Unified Soil Classification System
UTS	Universal Treatment Standards
VC	Vinyl Chloride
VOC	Volatile Organic Compound
VSI	Visual Site Inspection
WQIP	Water Quality Indicator Parameters

Chevron USA, Inc –
Buckeye Perth Amboy Terminal LLC

Final RCRA Corrective Action Permit Renewal

EPA ID No: NJD081982902

July 2013

Chevron USA Inc -Buckeye Perth Amboy Terminal LLC
FINAL RCRA Corrective Action Permit Renewal
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MODULE I - STANDARD CONDITIONS

A. EFFECT OF PERMIT.

This Permit renewal authorizes the management of hazardous wastes expressly described in this Permit. This Permit does not authorize any other hazardous waste management activities. Compliance with the terms of this Permit constitutes compliance, for purposes of enforcement, with the requirements of Subtitle C ("Hazardous Waste Management") of the Resource Conservation and Recovery Act of 1976 ("RCRA"), as amended by the Hazardous and Solid Waste Amendments of 1984 ("HSWA"), except for those requirements not included in the Permit which become effective by statute, or which are promulgated under Title 40 of the Code of Federal Regulations (40 C.F.R) Part 268 restricting the placement of hazardous waste in or on the land and under Subpart BB of Part 264 of this chapter. Issuance of this Permit does not convey any property rights of any sort, or any exclusive privilege; nor does it authorize any injury to persons or property, or invasion of other private rights, or any infringement of the laws of the New Jersey or local laws or regulations. Compliance with the terms of this Permit does not constitute a defense to any action brought under Sections 3013, 3008(h) and/or Section 7003 of RCRA, 42 U.S.C. §§ 6934, 6928(h) and/or 6973; Sections 104, 106(a), 107 and/or 122 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ("CERCLA"), as amended, Title 42 of the United States Code (42 U.S.C.) § 9601(a) et seq., or any other law, and applicable regulations governing protection of public health or the environment.

B. PERMIT ACTIONS.

This Permit may be modified, revoked and reissued, or terminated for cause as specified in 40 C.F.R. §§ 270.41, 270.42 and 270.43. The filing of a request for a permit modification, revocation and reissuance, or termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any condition of this Permit. [40 C.F.R. § 270.30(f)]. Review of any application for a Permit renewal shall involve consideration of improvements in the state of control and measurement technology, as well as changes in applicable regulations. [Section 3005(c)(3) of RCRA, 42 U.S.C. § 6925(c)(3)]

C. PERMIT CONDITIONS.

Pursuant to Section 3005(c)(3) of RCRA, 42 U.S.C. § 6925(c)(3), promulgated as regulation at 40 C.F.R. § 270.32(b), this Permit contains those terms and conditions the Administrator determines necessary to protect human health and the environment. If not otherwise specified in this Permit, all the requirements of 40 C.F.R. §§ 270.30, 270.31, 270.32 and 270.33 are hereby incorporated into this Permit by reference.

D. PERMIT SUBMITTALS.

1. Effect of Permit. All plans, reports and schedules required by the terms of this Permit are, unless otherwise specified, upon approval by the United States Protection Agency (EPA or Agency), incorporated by reference into this Permit. Upon incorporation, the provisions of each such document shall be binding upon the Permittee and have the same legal force and effect as the requirements of this Permit.

2. Submittal Modification. The Permittee shall submit plans and reports required by this Permit to the Agency for review and comment. Unless otherwise specified, EPA shall review any plan, report, specification, or schedule submitted pursuant to, or required by this Permit, and provide its written approval/disapproval, comments and/or modifications to the Permittee. Unless otherwise specified by the Agency, the Permittee shall submit a revised proposal within thirty (30) days of its receipt of the EPA's written comments and/or modifications. EPA shall grant or deny any such request for an extension. Any revised proposal submitted by the Permittee shall incorporate the EPA's comments and/or modifications. EPA will then approve the revised proposal or modify the proposal and approve it with any such modifications. The revised proposal, as approved by EPA, shall become final. All final approvals shall be given to the Permittee in writing.

E. SEVERABILITY.

The provisions of this Permit are severable, and if any provision of this Permit, or the application of any provision of this Permit to any circumstance is stayed or held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby. [40 C.F.R. § 124.16(a)]

F. DUTIES AND REQUIREMENTS.

1. Duty to Comply. The Permittee shall comply with all conditions of this Permit, except that the Permittee need not comply with the conditions of this Permit to the extent and for the duration such noncompliance is authorized by an emergency permit pursuant to 40 C.F.R. § 270.61. Any noncompliance with this Permit, except under the terms of an emergency permit, constitutes a violation and is grounds for: 1) enforcement action; 2) Permit termination, revocation and reissuance, or modification; and/or 3) denial of a Permit renewal application. [40 C.F.R. § 270.30(a)]

2. Duty to Reapply. If the Permittee wishes to continue an activity regulated by this Permit after the expiration date of this Permit, the Permittee shall submit a complete application for a new Permit at least 180 days before this Permit expires, unless the Director grants permission for a later date, which date shall not be later than the expiration date of the existing Permit. [40 C.F.R. § 270.10(h) and § 270.30(b)]

3. Permit Expiration and Continuation. Unless modified pursuant to Condition J of this module, this Permit will be in effect for the time period, which must not exceed ten (10) years. As set forth in 40 C.F.R. § 270.51, as long as EPA is the Permit issuing authority, this Permit and all conditions herein will remain in effect beyond the Permit's expiration date if the Permittee has submitted a timely, complete application (40 C.F.R. § 270.13 through § 270.23 and § 270.10) and through no fault of the Permittee, the Director has not issued a new Permit with an effective date established in accordance with 40 C.F.R. § 124.15.

4. Agreement with Local Authorities. In accordance with 40 C.F.R. § 264.37, the Permittee within 30 days of the effective date of this permit, must provide to the Director of EPA Region 2's Clean Air and Sustainability Division (Division Director) documentation of the arrangements made with local agencies including arrangements with police, fire department and emergency response team (state and local). This documentation must meet the requirements of 40 C.F.R. § 264.37 and must include documentation of any refusal of the local authorities to enter into arrangement with the Permittee.

5. Need to Halt or Reduce Activity Not a Defense. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit. [40 C.F.R. § 270.30(c)]

6. Duty to Mitigate. In the event of noncompliance with this Permit, the Permittee shall take all reasonable steps to minimize releases to the environment, and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment. [40 C.F.R. § 270.30(d)]

7. Proper Operation and Maintenance. The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, adequate sampling, laboratory and process controls, including appropriate quality assurance/quality control ("QA/QC") procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the Permit. [40 C.F.R. § 270.30(e)]

8. Duty to Provide Information. The Permittee shall furnish to the Director, within a reasonable time, any relevant information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this Permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this Permit. [40 C.F.R. §§ 270.30(h) and 264.74(a)]

9. Inspection and Entry. The Permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

   (a) Enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit;

   (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;

   (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and

(d) Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized, any substances or parameters at any location. [40 C.F.R. § 270.30(i) and § 264.74(a)]

10. Monitoring and Records.

(a) Representativeness of Samples and Measurements. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. [40 C.F.R. § 270.30(j)(1)]. The method used to obtain a representative sample of the waste to be analyzed must be the appropriate method from Appendix I of 40 C.F.R. Part 261 or an equivalent sampling method approved by the Director. 40 C.F.R. § 261.20(c). Laboratory methods must be those specified in Test Methods for Evaluating Solid Waste: Physical/ Chemical Methods (EPA Publication SW-846, Third Edition, 1987, or as later amended) and Standard Methods for the Examination of Water and Waste Water (16th Edition, 1985 or as later amended), or an equivalent method approved by EPA. [40 C.F.R. § 270.6]

(b) Retention of Records. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports and records required by this Permit, and the certification required by 40 C.F.R. § 264.73(b)(9) and record of all data used to complete the application for this Permit for a period of at least three (3) years from the date of the sample, measurement, report, certification, or application. These periods may be extended by request of the Director at any time. The Permittee shall maintain records from all groundwater monitoring wells and associated groundwater surface elevations, for the active life of the facility, and for disposal facilities for the post-closure care period as well. [40 C.F.R. § 270.30(j)(2)]

(c) Content of Monitoring Records. Records of monitoring information shall specify:

(i) The date(s), exact place, and time of sampling or measurements;

(ii) The individual(s) who performed the sampling or measurements;

(iii) The date(s) analyses were performed;

(iv) The individual(s) who performed the analyses;

(v) The sampling techniques or methods used;

(vi) The analytical techniques or methods used; and

(vii) The results of such analyses. [40 C.F.R. § 270.30(j)]

(d) Quality Assurance Program. The Permittee shall conduct a quality assurance program to ensure that the monitoring data are technically accurate and statistically valid. The quality assurance program shall be in accordance with Section 10 of Test Methods for Evaluating Solid Waste: Physical/Chemical Methods (EPA Publication SW-846, Third Edition, 1987, or as currently amended), or with the requirements or EPA's most current statement of work for the National Contract Laboratory Program, and EPA Region 2's CERCLA Quality Assurance Manual (Revision 1, October 1989, or as currently amended), and the most current Standard Operating Procedure, Functional Guidelines for Evaluating Organics Analyses, and the most current Standard Operating Procedure, Evaluation of Metals Data for the Contract Laboratory Program, or an EPA-approved quality assurance program.

(e) Monitoring Reports. Monitoring results must be reported at the intervals specified elsewhere in this Permit. [40 C.F.R. § 270.30 (l)(4)]

11. Reporting Planned Changes. The Permittee shall give notice to the Director, as soon as possible, of any planned physical alterations or additions to the permitted facility, which would affect the Permittee's operation or activities under this Permit. [40 C.F.R. § 270.30(l)(1)]

12. Anticipated Noncompliance. The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with this Permit's requirements. This notice must include a description of all incidents of noncompliance reasonably expected to result from the proposed changes. [40 C.F.R. § 270.30(l)(2)]

13. Transfer of Permit. This Permit is not transferable to any person or corporation unless notice has been given to the Director and the Permit has been modified, or revoked and reissued, or a modification made to identify the new Permittee and to incorporate such other requirements as may be necessary.
[40 C.F.R. § 270.30(l)(3) and § 270.40]

14. Compliance Schedules. See specific Permit conditions.

15. Immediate Reporting of Releases.

(a) Whenever there is an imminent or actual emergency situation, the emergency coordinator, as designated in the contingency plan, or his designee when the emergency coordinator is on call, must immediately:

(i) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and

(ii) Notify appropriate State or local agencies with designated response roles if their help is needed [40 C.F.R. § 264.56(a)(1) and (2)]

(iii) Notify appropriate EPA personnel with designated response roles if their help is needed [40 C.F.R. § 264.56(a)(1) and (2)]

(b) If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health, or the environment, outside the facility, he must report his findings as follows:

(i) If his assessment indicates that evacuation of local areas may be advisable, he must immediately notify appropriate local authorities. He must be available to help appropriate officials decide whether local areas should be evacuated; and

(ii) He must immediately notify either the government official designated as the on-scene coordinator for that geographical area, or the National Response Center (using their 24-hour toll free number (800) 424-8802). The report must include:

a. Name and telephone number of reporter;

b. Name and address of facility;

c. Time and type of incident (e.g., release, fire);

d. Name and quantity of material(s) involved, to the extent known;

e. The extent of injuries, if any; and

f. The possible hazards to human health, or the environment, outside the facility. [40 C.F.R. § 264.56]

16. Twenty-four Hour Reporting.

(a) The Permittee shall report to the Director any noncompliance with this Permit which may endanger human health or the environment. Any such information shall be reported orally within 24 hours from the time the Permittee becomes aware of the circumstances. This report shall include the following:

(i) Information concerning the release of any hazardous waste or

(ii) Any information of a release or discharge of hazardous waste, or of a fire or explosion at the facility, which could threaten the environment or human health outside the facility;

(b) The description of the occurrence and its cause, as reported pursuant to subparagraph 15(a) immediately above shall include:

(i) Name, address and telephone number of the owner or operator;

(ii) Name, address, and telephone number of the facility;

(iii) Date, time, and type of incident;

(iv) Name and quantity of material(s) involved;

(v) The extent of injuries, if any;

(vi) An assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and

(vii) Estimated quantity and disposition of recovered material that resulted from the incident. [40 C.F.R. § 270.30(l)(6)]

(c) A written submission shall also be provided to the Director within five (5) calendar days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance (including exact dates and times); whether the noncompliance has been corrected; and if the noncompliance has not been corrected, the anticipated time it is expected to continue and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The Permittee need not comply with the five days written notice requirement if the Director waives that requirement and the Permittee submits a written report within fifteen (15) calendar days of the time the Permittee becomes aware of the circumstances. [40 C.F.R. § 270.30(l)(6)(iii)]

The oral reports required above may be made by contacting the EPA Region 2 24-hour Emergency Response Center, at (732) 548-8730, or any designated telephone number which may subsequently replace it.

17. Unmanifested Waste Report. The Permittee shall comply with the requirements of 40 C.F.R. § 270.30(l)(8).

18. Manifest Discrepancy Report. The Permittee shall comply with the requirements of 40 C.F.R. § 270.30(l)(7).

19. Biennial Report. The Permittee shall prepare and submit a biennial report covering facility activities. This report shall be submitted by March 1 of each even numbered calendar year and shall contain all of the information required by 40 C.F.R. § 264.75 and 40 C.F.R. § 270.30(l)(9).

20. Additional Noncompliance Reporting. The Permittee shall report all instances of noncompliance (including release of hazardous waste, fire, or explosion) not required to be reported under Permit Conditions I.F.10, I.F.15 or I.F.16. Such noncompliance shall be reported for each calendar quarter (i.e., January through

March and each subsequent quarter) by no later than 30 days after the end of the quarter. The reports shall contain the information listed in Permit Condition I.F.16.(b), and all other relevant information. [40 C.F.R. § 270.30(l)(10)]

21. Other Information. Whenever the Permittee becomes aware that it failed to submit any relevant facts in the Permit application, or submitted incorrect information in a permit application, or in any report to the Regional Administrator or the Director, the Permittee shall promptly submit such facts or information to the Regional Administrator or the Director. [40 C.F.R. § 270.30(l)(11)]

G. SIGNATORY REQUIREMENT.

All applications, reports or other information submitted to the Regional Administrator or the Director shall be signed and certified as required by 40 C.F.R. §§ 270.11 and 270.30(k).

H. CONFIDENTIAL INFORMATION.

The Permittee may claim confidential any information required to be submitted by this Permit in accordance with 40 C.F.R. § 270.12 and 40 C.F.R. Part 2, Subpart B.

I. DOCUMENTS TO BE MAINTAINED AT THE FACILITY.

In addition to a copy of this Permit and any amendments, revisions, or modifications to the Permit and its attachments, the following information must be recorded, as it becomes available, and maintained in the operating record until closure of the facility, except as noted.

A copy of the written operating record that was prepared in accordance with 40 C.F.R. § 264.73. This operating record shall include, at a minimum, the following information:

1. The location of each hazardous waste within the facility and the quantity at each location.

2. A copy of the waste analysis plan that was prepared in accordance with 40 C.F.R. § 264.13(b).

3. Records and results of waste analyses performed as specified in 40 C.F.R. §§ 264.13, 264.17, 264.272, 264.278, 268.4(a), and 268.7.

4. Summary reports and details of all incidents that require implementation of the contingency plan as specified in 40 C.F.R. § 264.56(j).

5. A copy of the written inspection plan and schedule prepared in accordance with 40 C.F.R. § 264.15(b) must be kept for the duration of the Permit.

6. Records and results of inspections as required by 40 C.F.R. §§ 264.15(d), 264.174, 264.226 and 264.279.

7. Personnel training documents and records that demonstrate continuous compliance with the requirements of 40 C.F.R. § 264.16(d).

8. A current copy of the contingency plan and all revisions to the plan, as required by 40 C.F.R. § 264.53(a).

9. Written closure plans and post-closure plans, as required by 40 C.F.R. § 264.112(a) and § 264.118(a).

10. A copy of the latest closure and post-closure cost estimate prepared in accordance with 40 C.F.R. §§ 264.142(a) and (c) and 264.144(a) and (c) and, when these estimates have been adjusted in accordance with 40 C.F.R. §§ 264.142(b) and 264.144(b), the latest adjusted closure and post-closure cost estimates, as required by 40 C.F.R. §§ 264.142(d) and 264.144(d).

11. Monitoring, testing, or analytical data where required by 40 C.F.R. Part 264, Subparts F, J, K, M, O, AA, BB and CC.

12. Records and results of waste analyses required by other parts of this Permit to demonstrate compliance with the requirements of 40 C.F.R. Part 268 (Land Disposal Restrictions).

J. PERMIT MODIFICATIONS.

The Permit may be modified as allowed under 40 C.F.R. §§ 270.41 and 270.42. Modifications to this Permit may be made by the Director for cause in accordance with 40 C.F.R. § 270.41. Modifications to the Permit may also be requested by the Permittee (40 C.F.R. § 270.42).

K. REPORTS, NOTIFICATIONS AND SUBMITTALS TO THE EPA

All reports, notifications or other submittals required by this Permit are to be submitted to the Director by certified mail or hand delivered to the following:

1. U.S. Environmental Protection Agency, Region 2
   Director
   Clean Air and Sustainability Division
   290 Broadway, 25th Floor
   New York, New York 10007-1866

2. U.S. Environmental Protection Agency, Region 2
   Chief
   Hazardous Waste Programs Branch
   290 Broadway, 22nd Floor
   New York, New York 10007-1866

3. U.S. Environmental Protection Agency, Region 2
   RCRA Record Center, Room 1538
   290 Broadway, 15th Floor
   New York, New York 10007-1866

L. DEFINITIONS.

For the purpose of this Permit, terms used herein shall have the same meaning as those set forth in 40 C.F.R. Parts 260 through 270, unless this Permit specifically states otherwise. Where terms are not otherwise defined, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

1. Area of Concern (AOC). Pursuant to the authority granted by Section 3005(c)(3) of RCRA and 40 C.F.R. § 270.32(b)(2), an Area of Concern is hereby defined for purposes of this Permit to mean an area at the facility or an area off-site impacted by migration of contamination from the Facility, where hazardous waste and/or hazardous constituents are present or are suspected to be present as a result of a release from the Facility. The term shall include area(s) of potential or suspected contamination as well as actual contamination. Such area(s) may require investigation and a determination of what, if any, corrective action may be necessary based on investigation results which show a potential or actual threat to human health and the environment.

2. Director. The Director of the Clean Air and Sustainability Division, United States Environmental Protection Agency Region 2, or the designee, or authorized representative of such Director.

3. EPA. The United States Environmental Protection Agency (also referred to as Agency), including Region 2.

4. Facility means all contiguous land and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units (e.g., one or more landfills, surface impoundments, or combination of them).

5. Hazardous constituents means those constituents listed in Appendix VIII to 40 C.F.R. § 261 and Appendix IX 40 C.F.R. Part 264.

6. Hazardous waste means a hazardous waste as defined in 40 C.F.R. § 261.3 or Section 1004 of RCRA.

7. Action Levels are health-based or environmental-based concentrations derived using chemical-specific toxicity information and standardized exposure assumptions. Action levels is used as a trigger mechanism for determining whether further corrective action necessary

8. Regional Administrator is the Regional Administrator of the United States Environmental Protection Agency, Region 2, his or her designee or authorized representative.

9. Release for purposes of this Permit includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment of any hazardous waste or hazardous constituent, unless expressly authorized under the terms of this Permit.

10. Solid Waste Management Unit (SWMU). A SWMU includes any discernible waste management unit from which hazardous constituents have migrated or may migrate, irrespective of whether the unit was intended for the management of hazardous or solid wastes (as those terms are defined in § 1004(5) and (27) of RCRA, 42 U.S.C. § 6903(5) and (27) and the regulations promulgated pursuant to RCRA, 40 C.F.R. §§ 261.2 and261.3). These units include, but are not limited to: landfills, surface impoundments, waste piles, land treatment units, tanks,

elementary neutralization units, transfer stations, container storage areas, incinerators, injection wells, recycling units, and closed and abandoned units. Any area which has become contaminated as a result of routine and systematic releases of hazardous or nonhazardous waste, or hazardous constituents may also be considered a SWMU. All permit references to, and conditions for SWMUs shall also apply to AOCs.

M. DISPUTE RESOLUTION.

1. The Permittee shall use its best effort in good faith to resolve informally all disputes or differences of opinion, which may arise in connection with this Permit. Such informal dispute resolution may include meeting with EPA staff, written submissions of information or relevant arguments and other oral or written exchange of views between Permittee and EPA staff.

2. If disputes arise which cannot be resolved informally as described in (1), immediately above, the procedures set forth in this subparagraph shall be followed by the Permittee in formally obtaining resolution. The Permittee shall notify the Director in writing of any such dispute(s). Within thirty (30) calendar days of such notification, the Permittee shall have the right to submit a written statement to the Director, which shall set forth the Permittee's specific points of contention, the Permittee's argument and evidence, and any additional material that the Permittee considers necessary or relevant for a proper determination of the matter. Effort to resolve the dispute(s) informally may continue between the Permittee and EPA staff subsequent to the Permittee's written submission to the Director. If the dispute(s) cannot be resolved informally within sixty (60) calendar days of the receipt of Permittee's written submission to the Director, the Director will provide Permittee a final decision in writing on the dispute(s), which decision shall set forth the Director's reasons for the decision. The Director's decision shall be the resolution of the dispute(s), shall be incorporated into the Permit and shall be implemented by the Permittee.

3. For purposes of this Dispute Resolution section, Module I.M, the term "Director, shall mean only the Director of the Division, or anyone formally acting in the Director's absence.

4. EPA will extend the schedule for performing any elements of work materially affected by the good faith invocation of the dispute resolution process.

N. COORDINATION WITH THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION (NJDEP).

Upon the issuance of the HSWA permit, EPA and NJDEP will coordinate with each other to ensure, by jointly reviewing and approving documents, that corrective action activities to be undertaken by the Permittee meet not only the EPA's but also the NJDEP's requirements. The EPA will be lead in that the NJDEP will provide their comments and concerns to the EPA and subsequently, the EPA will transmit one single letter incorporating EPA's and NJDEP's comments or concerns to the Permittee. Any conflicts between the Agencies will be resolved prior to communicating with the Permittee. It is expected that standards promulgated by EPA and NJDEP for action levels and cleanup levels will be consistent. However, any differences in standards will be resolved prior to communication with the Permittee. The standard will be protection of human health and the environment.

MODULE II - FACILITY DESCRIPTION AND CONDITIONS

A. FACILITY DESCRIPTION.

The Chevron-Buckeye facility is a 259.5-acre industrial facility located in an industrial area. The facility has been in operation since 1920. Barber Asphalt Company built and began operations as an asphalt refinery in 1920. The California Oil Company (which later became Chevron) purchased the property in 1946 and expanded operations into a full service refinery in 1950. In 1983, Chevron shut down several process units and scaled back the refinery operation to asphalt topping. Chevron suspended operation of the asphalt operation in 2009. In August 2012, Chevron sold a large portion of the property to Buckeye Perth Amboy Terminal LLC, while still retaining ownership of northern portion of the Main Yard. As a result, the facility is now co-owned by Chevron and Buckeye.

The facility is bounded to the north and south by industrial properties and to the west by commercial and residential properties along Convery Boulevard. Amboy Avenue runs north-south through the western portion of the facility and State Street runs north-south through the eastern portion. Maurer Road crosses east-west through the central portion of the facility and connects Amboy Avenue to State Street. The site is bounded to the east by the Arthur Kill, which provides docking berths for tanker ships. Woodbridge Creek flows from the northwest to southeast through the northern portion of the facility. Spa Spring Creek flows along the northern property boundary and discharges into Woodbridge Creek. Groundwater at the facility is not used as a drinking water source, and some areas are saline due to naturally-occurring salt water intrusion. The current facility consists of tank fields, the asphalt area, process areas, offices, mechanical shops, wastewater treatment units, pipelines, and tanker docks. The North Field Extension (NFE) is a vacant tract of land separated from the remainder of the facility by Woodbridge Creek, and has not been developed or used by Chevron for industrial or commercial purposes.

The facility generated various wastewaters including: process wastewater from the production processes; non-contact cooling water; water from a steam generator, cooling tower, and boiler; wastewater generated from washing process areas; heat exchanger cleaning water; and laboratory wastewater. In addition, the facility has managed storm water which may contain hazardous constituents through contact with hazardous materials located in process areas. In 1976, Chevron started operating the Effluent Treatment Plant (ETP), currently owned and operated by Buckeye under a New Jersey Permit Discharge Elimination System (NJPDES) Discharge to Surface Water Permit, to

further treat wastewater before it is discharged to Woodbridge Creek. The units utilized for the treatment of wastewater and the recovery of recyclable material are: Diversion/Collection Tanks; an API Separator; an Induced Air Floatation (IAF) Unit; Float Separation Tanks including Tank 9205; an Equalization Tank; a Rotating Biological Contactors System; Clarifier Tanks; and a Post-aeration Tank. The ETP operates under a permit from the New Jersey Department of Environmental Protection (NJDEP).

Previously, the facility had two hazardous waste RCRA regulated units. These were a surface impoundment called the Surge Pond in the Main Yard and a land treatment unit called the Landfarm in Amboy Field. Both units managed petroleum RCRA listed hazardous wastes. Chevron closed the Surge Pond in-place through stabilizing the sludge and installing a cap under the 1994 permit. Closure activities at the Surge Pond were completed in December 2004. The closed in-place Surge Pond area is currently subject to monitoring and post-closure care under NJDEP oversight. The former Landfarm was clean closed under the 1994 permit through the removal and off-site disposal of all wastes and contaminated soils. Currently, the only hazardous waste management area remaining at the facility is less-than-90 day short term hazardous waste container storage. There are currently no operating hazardous waste management units at the facility.

Geologically, the facility is underlain by the Raritan Formation, which consists of layers of sand and clay. A fill layer is often found from land surface to approximately 10 feet below grade. This layer typically consists of mostly sand or clay with various amounts of silt, gravel or miscellaneous debris. The fill layer is thicker in the formation's lowland areas (generally, areas closer to the Arthur Kill and the creeks). When found in upland areas, the fill is localized in small areas. The next 10 to 20 feet below surface is a dark gray to black organic clay with minor amounts of sand and gravel. From depths of approximately 25 to 50 feet is a layer of glacial till. The till is predominantly silt and sand with spots of clay and gravel. The next lower layer is considered to be part of the Woodbridge Clay. It consists of gray sand to silty clay and varies in thickness from zero to 40 feet. From depths of 50 to 65 feet is a sand layer that is considered to be part of the Farrington Sand. It is composed of fine-to-coarse grained sand with occasional clay and gravel beds. Due to salt water intrusion, the portion of the Farrington Sand adjacent to the Woodbridge Creek exhibits high levels of natural concentrations of chloride. These concentrations have caused the groundwater in this area to be classified by the New Jersey Ground Water Quality Standards as a III-B area. Bedrock was encountered in several deep borings onsite at 65 to 85 feet below ground surface.

B. DESIGN AND OPERATION OF FACILITY.

The Permittee shall maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous constituents to air, soil, or surface water which could threaten human health or the environment.

The Permittee is solely authorized to store, treat, and dispose of hazardous waste pursuant to the provisions of this Permit, including Modules III.

C. PROHIBITION ON RECEIPT OF OFF-SITE WASTES.

The Permittee is not allowed to receive hazardous waste at the Facility from any off-site sources, except for remediation of wastes related to source at the site.

D. GENERAL WASTE ANALYSIS.

1. The Permittee shall maintain a Waste Analysis Plan (WAP), and follow the procedures in the WAP, including conducting a quality assurance program.

2. The Permittee shall verify its waste analysis as part of the quality assurance program. The quality assurance program will be in accordance with current EPA practices (Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846, Third Edition, 1987, or as currently amended, and the data validation procedures as established by the Division Director) or equivalent methods approved by the Division Director, and at a minimum, ensure that the Permittee maintains properly functioning instruments, uses approved sampling and analytical methods as specified in 40 C.F.R. Part 261, Appendices I, II and III, assures the validity of sampling and analytical procedures, and performs correct calculations.

3. In addition to the requirements set forth in the WAP, the Permittee shall comply with the provisions below:

   (a) Whenever changes in plant processes alter the wastes generated, or affect the manner in which a specific waste is managed, the Permittee shall review and, if necessary, amend the WAP and obtain a permit modification pursuant to 40 CFR § 270.42. Modifications to the WAP must include the requirements set forth in paragraph D.4. below.

(b) The Permittee shall maintain records as stipulated by the WAP on the analyses of a representative sample of each waste. However, when a specific process generates a waste stream instead of an individual waste, a detailed chemical and physical analysis of a representative sample of such waste stream will be sufficient to comply with this requirement.

(c) The Permittee shall repeat any waste analysis as necessary to ensure that it is accurate and up to date. At a minimum, an analysis shall be repeated when the Permittee is notified, or has reason to believe, that a process or operation generating a hazardous waste has changed, unless the change will not result in a change in the chemical or physical makeup of the relevant waste material.

(d) The Permittee shall keep a copy of its approved WAP at the facility in accordance with the requirements of Permit Condition I.I. of this Permit.

4. At a minimum, the WAP must include the following:

(a) The parameters to be analyzed for in each hazardous waste, and the rationale for the selection of these parameters, as required by 40 C.F.R. § 264.13(b)(1);

(b) The test methods which will be used to test for these parameters, as required by 40 C.F.R. § 264.13(b)(2);

(c) The sampling method(s) which will be used to obtain a representative sample of the waste to be analyzed, as required by 40 C.F.R. § 264.13(b)(3); and

(d) The frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up to date, as required by 40 C.F.R. § 264.13(b)(4).

5. The Permittee shall comply with all applicable land disposal restriction provisions set forth in 40 C.F.R. Part 268 and Module IV of this Permit.

E. SECURITY.

The Permittee shall comply with the security provisions of 40 C.F.R. § 264.14, and prepare a Security Plan. At a minimum, the Security Plan must contain procedures that require the Permittee to:

1. Provide a 24-hour surveillance system which continuously monitors and controls entry onto the active portions of the facility; or

2. Provide the following controls:

   (a) An artificial or natural barrier which completely surrounds the active portions of the facility; and

   (b) A means to control entry, at all times, through the gates or other entrances to the facility. 40 C.F.R. § 264.14(b).

3. The Permittee shall post and maintain a warning sign with the legend,"DANGER--Unauthorized Personnel Keep Out," at each entrance to the active portion of a facility, and at other locations, in sufficient numbers to be seen from any approach to the active portion. The legend must be written in both English and Spanish and be legible from a distance of at least 25 feet. Existing signs, at the time of permit issuance, with a different legend may be used only if the legend on the sign indicates that only authorized personnel are allowed to enter the active portion, and that entry onto the active portion can be dangerous. 40 C.F.R. § 264.14(c).

F. GENERAL INSPECTION REQUIREMENTS.

The Permittee shall follow the Inspection Plan and Schedule specified in Attachment F, Procedures to Prevent Hazard, of this Permit and demonstrate continuous compliance with 40 C.F.R. § 264.15. The Permittee shall remedy any deterioration or malfunction discovered by an inspection as required by 40 C.F.R. § 264.15(c). Records of inspections shall be kept as required by 40 C.F.R. § 264.15(d). At a minimum, inspections must include the following:

1. Inspecting monitoring equipment, safety and emergency equipment, security devices, loading and unloading areas, and operating and structural equipment that are important for preventing, detecting, or responding to environmental or human health hazards, as required by 40 C.F.R. § 264.15(b)(1);

2. The schedule must identify the types of problems which are to be looked for during the inspection, as required by 40 C.F.R. § 264.15(b)(3);

3. The frequency of inspection, which is based on the rate of possible deterioration of the equipment and the probability of an environmental or human health incident if the deterioration, malfunction, or any operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas must be inspected daily when in use. At a minimum, the inspection schedule must include the terms and frequencies as required in 40 C.F.R. § 264.15 (b)(4);

4. The specific remedy to be implemented when inspections reveal problems shall be recorded in the inspection log.

G. PERSONNEL TRAINING.

The Permittee shall conduct personnel training as required by 40 C.F.R. § 264.16(a), (b) and (c). The Permittee shall maintain training documents and records as required by 40 C.F.R. § 64.16(d) and (e). At a minimum, the training program shall include the following:

1. The program must be directed by a person trained in hazardous waste management procedures, and must include instruction which teaches facility personnel hazardous waste management procedures relevant to the positions in which they are employed, as required by 40 C.F.R. § 264.16(a)(2);

2. As required by 40 C.F.R. § 264.16(a)(3), the training program must be designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems, including, where applicable:

   (a) Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment;

   (b) Key parameters for automatic waste feed cut-off systems;

   (c) Communications or alarm systems;

   (d) Response to fires or explosions;

(e) Response to groundwater contamination incidents; and

(f) Shut-down of operations.

3. In accordance with 40 C.F.R. § 264.16(b) and (c), provisions to ensure that:

(a) Facility personnel must successfully complete the program required by 40 C.F.R. § 264.16(a) within six (6) months after the date of their employment or assignment to a facility, or to a new position at a facility, whichever is later;

(b) Employees do not work in unsupervised positions until they have completed the training requirements of 40 C.F.R. § 264.16(a); and

(c) Facility personnel take part in an annual review of the initial training required by 40 C.F.R. § 264.16(a).

H. GENERAL REQUIREMENTS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE.

The Permittee shall take precautions to prevent accidental ignition or reaction of ignitable or reactive waste as required by 40 C.F.R. § 264.17. The Permittee shall also document this compliance, as required by 40 C.F.R. § 264.17(c).

I. LOCATION STANDARDS.

The Permittee shall comply with the standards of 40 C.F.R. § 264.18(b).

J. PREPAREDNESS AND PREVENTION.

1. Required Equipment. At a minimum, the Permittee shall equip the facility with the equipment set forth in the Contingency Plan (see K., below) and as required by 40 C.F.R. § 264.32.

2. Testing and Maintenance of Equipment. The Permittee shall test and maintain the equipment specified in the previous permit condition as necessary to assure its proper operation in time of emergency, as required by § 264.33.

3. Required Equipment and Access to Communications or Alarm System. The Permittee shall provide equipment as required by 40 C.F.R. § 264.32, and maintain immediate access to the communications or alarm system as required by 40 C.F.R. §264.3.

4. Required Aisle Space. At a minimum, the Permittee shall maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of the facility in an emergency as required by 40 C.F.R. § 264.35, and to provide access for the at least weekly inspections required by 40 C.F.R. §264.174.

5. Arrangements with Local Authorities. The Permittee shall attempt to make arrangements with the State of New Jersey and local authorities as required by 40 C.F.R. § 264.37. If State or local officials refuse to enter into preparedness and prevention arrangements with the Permittee, the Permittee must document this refusal in the operating record.

K. CONTINGENCY PLAN.

1. Implementation of Plan. The Permittee shall develop and follow the provisions of a Contingency Plan pursuant to 40 C.F.R. Subpart D, whenever there is a fire, explosion, or any release of hazardous waste or hazardous waste constituents which threatens or could threaten human health or the environment.

2. Resumption of Hazardous Waste Activity. After any event requiring implementation of the Contingency Plan, the Permittee shall not resume hazardous waste management in the affected area until all equipment used during the contingency has been cleaned, recharged, or replaced, as appropriate.

3. Copies of Plan. The Permittee shall comply with the requirements of 40 C.F.R. § 264.53, which require that a copy of the Contingency Plan and all revisions to the plan must be:

   (a) Maintained at the facility; and

   (b) Submitted to all local police departments, fire departments, hospitals, and State and local emergency response teams that may be called upon to provide emergency services.

4. Amendments to Plan. The Permittee shall review and immediately amend, if necessary, the Contingency Plan, as required by 40 C.F.R. § 264.54. The Plan must be reviewed whenever:

   (a) The facility permit is revised;

   (b) The plan fails in an emergency;

   (c) The facility changes in design, construction, operation, maintenance, or other circumstances in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;

   (d) The list of emergency coordinators changes;

   (e) The list of emergency equipment changes; or

   (f) A 100-year storm event or 100-year hurricane occurs.

5. Contents of Contingency Plan. The Permittee must ensure that the Contingency Plan contains the information required by 40 C.F.R. § 264.52.

6. Emergency Coordinator. The Permittee shall comply with 40 C.F.R. § 264.55 at all times. Only qualified individuals, specified in the Contingency Plan, may act as the Emergency Coordinator or Alternate Emergency Coordinator. The Emergency Coordinator shall be available at all times in case of an emergency, and must have the authority to commit the resources needed to carry out this Plan.

7. Emergency Procedures. The Permittee's emergency coordinator (or his designee when the emergency coordinator is on call) shall immediately implement the emergency procedures required by 40 C.F.R. § 264.56 whenever there is an imminent or actual emergency situation.

L. MANIFEST SYSTEM.

The Permittee shall comply with the manifest requirements of 40 C.F.R. §§ 264.71 and 264.72.

M. RECORDKEEPING AND REPORTING.

1. Operating Record. The Permittee shall maintain a written operating record at the facility in accordance with the applicable portions of 40 C.F.R. § 264.73.

2. Availability, Retention, and Disposition of Records. All records, including plans, must be made available to EPA in accordance with 40 C.F.R. § 264.74(a). The retention period for all records is extended automatically during any unresolved enforcement action regarding the facility or as requested by the Division Director, as required by 40 C.F.R. § 264.74(b). A copy of records of waste disposal locations and quantities under § 264.73(b)(2) must be submitted to the Division Director and local land authority upon closure of the facility as required by § 264.74(c).

3. Biennial Report. The Permittee shall comply with the biennial report requirements of 40 C.F.R. § 264.75, by March 1 of each even numbered year.

4. Unmanifested Waste Report. If Permittee accepts for treatment or storage hazardous waste without an accompanying manifest, or without an accompanying shipping paper as described in § 263.20(e)(2) of this chapter, and if the waste is not excluded from the manifest requirement by § 261.5 of this chapter, then the owner or operator must prepare and submit a single copy of a report to the Division Director within fifteen days after receiving the waste. The unmanifested waste report must be submitted on EPA form 8700-13B. Such report must be designated `Unmanifested Waste Report' and include the following information, as required by 40 C.F.R. § 264.76:

   (a) The EPA identification number, name, and address of the facility;

   (b) The date the facility received the waste;

   (c) The EPA identification number, name, and address of the generator and the transporter, if available;

   (d) A description and the quantity of each unmanifested hazardous waste and facility received;

   (e) The method of treatment, storage, or disposal for each hazardous waste;

(f) The certification signed by the owner or operator of the facility or his authorized representative; and

(g) A brief explanation of why the waste was unmanifested, if known.

5. Additional Reports. The Permittee shall comply with the additional reporting requirements set forth in 40 C.F.R. § 264.77. At a minimum, the Permittee shall report to the Division Director:

(a) Releases, fires, and explosions as specified in 40 C.F.R. § 264.56(j);

(b) Facility closures as specified in 40 C.F.R. § 264.115; and

(c) As otherwise required by 40 C.F.R. Part 264, Subparts F and K through N.

N. LIABILITY REQUIREMENTS.

The Permittee shall demonstrate continuous compliance with the requirements of 40 C.F.R. § 264.147 and the documentation requirements of 40 C.F.R. § 264.151, including requirements to have and maintain liability coverage for sudden accidental occurrences in the amount of at least $1 million per occurrence with an annual aggregate of at least $2 million, exclusive of legal defense costs.

O. INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS.

The Permittee shall comply with 40 C.F.R. § 264.148 whenever necessary.

MODULE III - CORRECTIVE ACTION REQUIREMENTS

A. SUMMARY OF CORRECTIVE ACTION PROCESS

Section 3004(u) of RCRA, 42 U.S.C. § 6924(u), and its corresponding regulation published in 40 C.F.R. § 264.101 require corrective action for all releases of hazardous wastes or constituents from any Solid Waste Management Unit (SWMU), regardless of when wastes were placed in the unit. Areas of Concern (AOCs) which are identified pursuant to Section 3005 (c)(3) of RCRA, 42 U.S.C. § 6925(c)(3), and its corresponding regulation set forth at 40 C.F.R. § 270.32 (b)(2), may also be subject to corrective action pursuant to this module and the process described below. The corrective action implementation process consists of a RCRA Facility Assessment (RFA), and if necessary, a RCRA Facility Investigation (RFI) phase, a Corrective Measures Study (CMS) phase, and a Corrective Measures Implementation (CMI) phase.

The RFA is a three phase study that includes a Preliminary Review (PR), a Visual Site Inspection (VSI) and a Sampling Visit (SV). The PR, which must be conducted at all treatment, storage and disposal facilities seeking a RCRA permit, is a review of all available information on the individual SWMUs. During the PR, and subsequent phases of the RFA, all of the media (i.e., soil, groundwater, surface water, air, and subsurface gas) that could potentially be impacted by releases of hazardous waste or hazardous constituents are evaluated. Based on this review, the SWMUs are characterized as to their release potentials.

Following the review, a VSI is conducted during which all of the SWMUs, either previously or newly discovered, are observed. While performing this reconnaissance, the inspector looks for any signs of spills or leakage, stained soil, stressed vegetation, unit deterioration, or any other conditions that may be indicative of a release. By means of these observations and the findings of the PR, EPA may require sampling at those areas where releases are suspected.

The SV can involve any or all of the previously described media at any given SWMU. For those units where releases are clearly demonstrated in the PR and/or VSI, the SV can be eliminated leaving the unit(s) to be addressed in the RFI.

The last aspect of the RFA involves preparing the RFA report. This report includes the findings of the various RFA activities and recommendations for further action at those units with demonstrated releases of hazardous wastes or constituents. In some cases, where an immediate threat to human health or the environment exists, interim corrective measures may be required.

If the RFA concludes that there is a need for further investigative work, the Permittee shall be required to perform an RFI. The purpose of the RFI is to determine the nature, extent and rate of migration of hazardous wastes or constituents in various media such as soils, groundwater, surface water, subsurface gas, and/or air. Based on these multimedia analyses, the types of contaminants present, the boundaries of any contamination (e.g., plumes), and the rate of contaminant movement can be determined. Once these analyses are completed, a RFI report is prepared that provides a summation of the data and recommendations for any needed remediation.

The next step in the corrective action process is the CMS. Initially, this study involves a comprehensive research effort aimed at determining the most environmentally beneficial corrective measure(s) (or remedies) for each contaminated SWMU. Once this research component of the CMS is completed, bench and pilot scale testing is performed to evaluate the field applicability of each corrective measure. The results of the testing, a description of the research activities, and recommended corrective measures are presented in a CMS report submitted by the Permittee to the Agency.

In the selection of a corrective measure (or remedy) following completion of the CMS, EPA will consider a Permittee's preferred corrective measure, other applicable corrective measures (if EPA determines it is appropriate to do so) and, in conformity with then existing EPA guidance, decide to tentatively approve the preferred remedy, tentatively select a different remedy or require additional analysis of remedial alternatives. EPA will continue to keep the public, including those interested parties on the mailing list, abreast of all important progress of the cleanup process. The selected corrective measure(s) shall be protective of human health and the environment over time. The owner or operator of the facility must demonstrate financial assurance for completing the approved corrective measure(s).

The culmination of the corrective action process is the CMI phase where the selected remedy is implemented. Remedy implementation typically involves detailed remedy design, remedy construction, and remedy operation and maintenance. The remedy implementation is generally conducted pursuant to a CMI Workplan. The public will have the opportunity to comment on the CMI conditions and schedules set forth in the CMI Workplan during a permit modification for remedy selection or when the permit is modified to incorporate the CMI Workplan, or a permit renewal.

B. APPLICABILITY

1. Corrective Measures For SWMUs and AOCs

The Permittee is responsible to implement corrective measures for specific SWMUs and AOCs at the Facility. The corrective measures include the remediation of source areas, soils and groundwater as appropriate at SWMUs and AOCs to levels protective of human health and the environment. For certain SWMUs and AOCs, no further action (NFA) is required. NFA determinations are subject to revision pursuant to permit conditions with respect to any new information, or any future or newly discovered releases or migration of hazardous substances. The corrective measures for these SWMUs and AOCs were evaluated and selected by EPA based on information and analyses contained in documents related to CMS including the CMS Pre-Design Investigation Results Report for the MainYard, East Yard and Central Yard, the CMS Final Report for Main Yard, East Yard, and Central Yard, the CMS Final Report for AOC 29, and the Corrective Action Management Units (CAMU) Application, including its Supplement.

2. Specific Corrective Measures

Corrective measures for each SWMU and AOC are detailed below. The listing of abbreviations is at the end of this Module. Additional information is contained in the following Appendices of this permit:

Appendix A . . . . . RFI Report
Appendix B . . . . . RFI Supplement
Appendix C . . . . . CMS Report
Appendix E . . . . . .CAMU Application and Supplement
Appendix D . . . . . Information Summaries and Table

The table below identifies the relationship between areas with light non-aqueous phase liquid (LNAPL) contamination and associated SWMUs and AOCs.

LNAPL Area	Associated SWMUs/AOCs
NF2	AOC 44, MY-AOC 16
State St Parking Lot	SWMU 11B
AOC 8-NF6	AOC 8, AOC 15
AOC 19	AOC 19
AOC 25	AOC 25
EY4b	AOC 26, AOC 14

NF3	SWMU 35, MY-AOC 16
NF 5	AOC 8, AOC 15
PAOC 15	AOC 6B, AOC 26
SWMU 8	SWMU 8
SWMU 43	SWMUs 5 and 43
EY3	EY-AOC 16
EY4a	AOC 6B, EY-AOC 16
NF4	SWMU 31
AOC 28	AOC 28
AOC 19	AOC 19
AOC 29	AOC 29
EY1	SWMU 42
SWMU 40	SWMU 40
SWMU 41	SWMU 41
SWMU 42	SWMU 42

(a) SWMUs:

SWMU No.1 consists of the former North Field Basin which was closed in accordance with a closure plan approved by the NJDEP. NFA for both soil and groundwater is proposed.

SWMU No. 2 consists of the Surge Pond. The Surge Pond was closed in-place by Chevron under NJDEP oversight through stabilizing the sludge and then capping the unit. Closure activities at the Surge Pond were completed in December 2004. The closed in-place Surge Pond area is currently subject to monitoring and post-closure care under NJDEP oversight. NFA is proposed for both soil and groundwater.

SWMU No. 3 consists of an approximately 500-foot by 110-foot rectangular earthen impoundment constructed in 1977 and shut down in 1988. The basin is located along the Arthur Kill bulkhead in the East Yard. The basin served as storage for stormwater runoff, process water and water draws from ASTs in the East Yard before transport to the ETP. The central portion of SWMU 3 overlies the former Oil Water Separator (SWMU 36) located along the bulkhead. This is a RCRA regulated unit, which closed under NJDEP oversight and is currently being monitored via closure wells installed in the area under NJDEP oversight. NFA is proposed for both soil and groundwater.

SWMU No. 5 consists of a 20-foot by 20-foot tetra ethyl lead (TEL) Sludge Burial Area located west of the Surge Pond in the North Field, which was identified as a solid waste management unit based on the presence of TEL burial. TEL Burial sites are composed of tank bottom sludges containing tetra-ethyl lead. During past operations, TEL was used extensively for gasoline. The TEL would settle out at the bottom of the AST and collect in the bottom sludges. The deposits would be periodically removed from the tanks and, typically, were buried in the soils surrounding the tanks of the Refinery. In general, the use of TEL ceased in 1975. The corrective measures are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if necessary; 2) in-situ stabilization for lead in soil, installation of a cap, and filing a deed notice; 3) continue LRMs for groundwater, until all the LNAPL is removed to the extent practicable; and 4) MNA and file a CEA for groundwater.

SWMU No. 6 is the TEL Burial Area east of Tank 9209, which consists of a 20-foot by 20-foot TEL sludge burial located in the western portion of Tank Basin 306 in the North Field, which was identified as a solid waste management unit based on the presence of a TEL burial. The corrective measures are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if necessary; 2) in-situ stabilization for lead in soil and filing a deed notice; 3) excavation, ex-situ stabilization and disposal in CAMU for TEL/TOL concentration > 2 mg/kg for soil; 4) filing a deed notice for benzo(a)pyrene (BAP) concentrations < 10 mg/kg and > 0.66 mg/kg; 5) continue LRMs for groundwater; until all the LNAPL is removed to the extent practicable, and 6) MNA and filing a CEA for groundwater.

SWMU No. 7 consists of two 20-foot by 20-foot TEL sludge burials located to the south and east of Tank Basin 305 in the North Field. The corrective measures are: 1) in-situ stabilization for lead in soil and filing a deed notice; 2) excavation, ex-situ stabilization, and disposal in CAMU for TOL concentration > 2 mg/kg in soil; 3) filing a deed notice for benzo(a)pyrene (BAP) concentrations < 10 mg/kg and > 0.66 mg/kg; and 4) further evaluation of groundwater.

SWMU No. 8 consists of two 20-foot by 20-foot TEL sludge burials located north-west of the former East Yard Basin (SWMU 3) in the East Yard. The SWMU 8 LNAPL Area was identified in 2004 when LNAPL was detected in MW-132, which was installed in the center of the SWMU 8 burial in October of 2002. The corrective measures for the contaminated media identified at SWMU 8 are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if necessary; 2) excavation, ex-situ stabilization and disposal in the CAMU for lead in soil and TEL/TOL concentrations > 2 mg/kg in soil, 3) filing a deed notice for benzo(a)pyrene (BAP) concentrations < 10 mg/kg and > 0.66 mg/kg: 4) continue LRMs for groundwater, until

all the LNAPL is removed to the extent practicable; 5) ISCO treatment for benzene concentrations >100 ug/L in groundwater; supplemented by enhanced bioremediation, if necessary; 6) in-situ geochemical stabilization for arsenic groundwater concentration> 60 ug/L using direct injection and/or reactive barrier wall; and 7) MNA and file a CEA for groundwater.

SWMU No. 9 is a suspected TEL Burial Area (East Yard - north-northwest corner of Tank 753 basin). The analytical results for the 10 samples collected from SWMU 9 showed that no constituents were present in excess of the applicable NRDCSCC and NRDCSRS. Groundwater modeling of PCOCs within this SWMU demonstrated no exceedances. Additionally, no LNAPL is present within this SWMU. Based on these analyses, it is determined that this SWMU was not used for TEL burial. NFA is proposed.

SWMU No. 10 consists of two TEL sludge burials located to the west of Tank Basin 771 in the East Yard. The corrective measures of the contaminated media are: 1) excavation, ex-situ stabilization and disposal in CAMU for TCLP lead levels >5 mg/l and TEL/TOL concentrations >2 mg/kg in soil; 2) in-situ stabilization for TCLP lead levels <5 mg/L and lead levels >800 mg/kg in soil, and filing a deed notice; 3) filing a deed notice for benzo(a)pyrene (BAP) concentrations < 10 mg/kg and > 0.66 mg/kg: 4) containment consisting of a cap with filing a deed notice afterward for arsenic concentrations > 20 mg/kg in surface soil; 5) ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if necessary; 6) in-situ geochemical stabilization for arsenic groundwater concentration> 60 ug/L using direct injection and/or reactive barrier wall; and 7) MNA and file a CEA for groundwater.

SWMU No. 11A consists of 3 TEL Burial Areas (State Street Parking Lot - three areas alongside Central Railroad of New Jersey [now Conrail] right-of-way); Ten soil samples were collected at SWMU 11A. Lead was detected above the NRDCSRS in analysis of one soil sample at a concentration of 1,820 mg/kg. Benzo(a)pyrene (3.1 mg/kg) was detected in one surficial soil sample above the NRDCSCC. No exceedances of the GWQS were found. The corrective measures are: 1) in-situ stabilization for lead in soil and filing a deed notice; 2) excavation, ex-situ stabilization and disposal in CAMU for TEL concentrations >2 mg/kg in soil; 3) filing a deed notice for benzo(a)pyrene (BAP) concentrations < 10 mg/kg and > 0.66 mg/kg; and 4) NFA (granted in January 21, 2005) for groundwater.

SWMU No. 11B was determined not to have been used for TEL burial, based on the fact that there were no exceedances of the applicable NRDCSCC and NRDCSRS in analytic results and that lead was not detected in the groundwater at this location. The corrective measures are: 1) NFA proposed for soil; 2) continue LRMs for groundwater, until all the

LNAPL is removed to the extent practicable; 3) ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if necessary: 4) MNA and file a CEA for groundwater.

SWMU No. 12 consists of 3 TEL Burial Areas (Main Yard - northwest side of Tank 27 basin). The corrective measures are: 1) excavation, ex-situ stabilization and disposal in the CAMU for TEL concentrations > 2 mg/kg in soil; 2) in-situ stabilization for lead in soil and filing a deed notice; 3) filing a deed notice for benzo(a)pyrene (BAP) concentrations < 10 mg/kg and > 0.66 mg/kg; and 4) further evaluation for groundwater.

SWMU No. 13 consists of a TEL Burial Area (Main Yard - west side of Tank 28 basin). Based on the fact that there were no exceedances of the applicable NRDCSCC and NRDCSRS in any of analytic results of soil samples, and that lead was not detected in the groundwater at this location, it has been determined that this location was not used for disposal of TEL wastes. NFA is proposed and granted for both soil and groundwater.

SWMU No. 14 consists of 2 TEL Burial Areas (Main Yard - southeast side of Tank 23 basin). No COCs were detected above the applicable NRDCSCC and NRDCSRS in soil or the GWQS in groundwater at this SWMU. NFA is proposed and granted for both soil and groundwater.

SWMU No. 15 consists of a TEL Burial Area (Main Yard - south side of Tank 14 basin). The corrective measures are: 1) excavation, ex-situ stabilization, and disposal in the CAMU for benzo(a)pyrene (BAP) concentrations >10mg/kg in soil; and 2) MNA and file a CEA for groundwater.

SWMU No. 16 consists of a 20-foot by 20-foot TEL sludge burial located in the eastern portion of Tank Basin 306 in the North Field. The corrective measures for the contaminated media are: 1) ISCO treatment for organic contamination in soil, supplemented by enhanced bioremediation, if necessary; 2) excavation, ex-situ stabilization and disposal in the CAMU for TOL concentrations >2 mg/kg in soil; 3) filing a deed notice for benzo(a)pyrene (BAP) concentrations < 10 mg/kg and > 0.66 mg/kg; 4) containment consisting of a cap with filing a deed notice afterward for arsenic concentrations > 20 mg/kg in surface soil; 5) ISCO treatment for benzene concentrations >100 ug/L in groundwater; 6) in-situ geochemical for arsenic groundwater concentration > 60 ug/L using direct injection and/or reactive barrier wall; and 7) MNA and file a CEA for groundwater.

SWMU No.17 consists of a 40-foot by 40-foot TEL sludge burial located in the eastern portion of Tank Basin 301 in the North Field. The corrective measures for the contaminated media are: 1) ISCO treatment for organic contamination in soil, supplemented by enhanced bioremediation, if necessary; 2) excavation, ex-situ stabilization and disposal in CAMU for lead in soil and TEL/TOL concentrations >2 mg/kg in soil; 3) filing a deed notice for benzo(a)pyrene (BAP) concentrations < 10 mg/kg and > 0.66 mg/kg; 4) ISCO treatment for benzene concentrations >100 ug/L in groundwater; and 5) MNA and file a CEA for groundwater.

SWMU No.18 consists of a 20-foot by 20-foot TEL sludge burial located in the western portion of Tank Basin 301 in the North Field. The corrective measures for the contaminated media are: 1) ISCO treatment for organic contamination in soil, supplemented by enhanced bioremediation, if necessary; 2) in-situ stabilization for lead in soil and file deed notice, 3) excavation, ex-situ stabilization and disposal in the CAMU for TOL concentrations >2 mg/kg in soil; 4) ISCO treatment, supplemented by enhanced bioremediation, if necessary, for benzene concentrations >100 ug/L in groundwater; and 5) MNA and file a CEA for groundwater.

SWMU No. 19 consists of a 20-foot by 20-foot TEL sludge burial located to the west of Tank 326 in the North Field. The corrective measures for the contaminated media are: 1) ISCO treatment for organic contamination in soil, supplemented by enhanced bioremediation, if necessary; 2) excavation, ex-situ stabilization and disposal in the CAMU for benzo(a)pyrene concentrations >10 mg/kg and TEL concentrations >2 mg/kg in soil; 3) containment consisting of a cap with filing a deed notice afterward for arsenic concentrations > 20 mg/kg in surface soil; and 4) MNA and file a CEA for groundwater.

SWMU No. 20 consists of a TEL burial area located east of Tank 302 in the North Field. The corrective measures for the contaminated media are: 1) excavation, ex-situ stabilization and disposal in the CAMU for TCLP lead levels >5 mg/L and TOL concentrations > 2mg/kg in soil; 2) in-situ stabilization for TCLP lead levels <5 mg/L and lead levels >800 mg/kg in soil and filing a deed notice; 3) containment consisting of a cap with filing a deed notice afterward for arsenic concentrations >20 mg/kg in surface soils; 4) ISCO treatment for benzene concentrations 100 ug/L in groundwater, supplemented by enhanced bioremediation, if necessary, and 5) MNA and file a CEA for groundwater.

SWMU No. 21 consists of a 20-foot by 20-foot TEL sludge burial located at the Mudflats in the North Field. The corrective measures for the contaminated media are: 1) ISCO treatment for organic contaminants in soil supplemented by enhanced bioremediation, if necessary; 2) in-situ stabilization for lead in soil, installing a non-RCRA cap, and filing a deed notice; and 3) MNA and file a CEA for groundwater.

SWMU 22 consists of a 20-foot by 20-foot TEL sludge burial located in the eastern portion of what was Tank Basin 329 in the North Field. The corrective measures are: 1) excavation, ex-situ stabilization and disposal in the CAMU for TOL concentrations >2 g/kg in soil; 2) filing a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg in soil; 3) MNA and file a CEA for groundwater.

SWMU No. 24 consists of two TEL weathering areas located north of Tank 306 (east of Tank 9209), at the south end of the ETP. The corrective measures for the contaminated media are: 1) ISCO treatment for organic contaminants in soil supplemented by enhanced bioremediation, if necessary; 2) excavation, ex-situ stabilization and disposal in the CAMU for TEL concentrations >2 mg/kg in soil; 3) containment consisting of a cap with filing a deed notice afterward for arsenic concentrations >20 mg/kg in surface soils; 4) filing a deed notice afterward for BAP concentrations < 10 mg/kg > 0.66 mg/kg; and 5) MNA and file a CEA for groundwater.

SWMU No. 25 consists of a TEL weathering area located north of East Yard Basin in the East Yard. There were no exceedances of applicable NRDCSCC and NRDCSRS in any analytic results of soil samples or the GWQS of the groundwater samples. NFA is proposed for both soil and groundwater.

SWMU No. 26 consists of the TEL Weathering Area south of the East Yard Basin. The corrective measures are: 1) excavation, ex-situ stabilization and disposal in CAMU for TOL concentrations >2 mg/kg in soil; 2) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; 3) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 4) in-situ geochemical stabilization for arsenic groundwater concentrations >60 ug/L using direct injection and/or reactive barrier wall; and 5) MNA and file a CEA for groundwater.

SWMU No. 27 consists of a TEL burial area located north of Tank 312, west of North Field Basin (NFB) Yard. The corrective measures for the contaminated media are: 1) excavation, ex-situ stabilization and disposal in CAMU for BAP concentrations >10 mg/kg and TEL concentrations >2 mg/kg in soil; 2) in-situ stabilization for lead in soil

and file a deed notice afterwards; 3) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 4) file a deed notice for soils with BAP concentrations <10 mg/kg and >0.66 mg/kg; and 5) NFA is proposed for groundwater.

SWMU No. 28 consists of the Reactor Burial site. In the early 1960's, there was an explosion and fire in the area producing phthalic anhydride. After the fire, a reactor tank used for the production was determined to be useless and was buried. The burial area is located near the Short Term Storage Area (SWMU 30). The corrective measures are: 1) further investigation of phthalic anhydride reactor area soil; 2) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 3) NFA proposed for groundwater.

SWMU No. 29 is the location of the former spent catalytic (cat) cracker. The fluid-cracking catalyst material was staged, loaded and transferred in this area. The corrective measures for the contaminated media are: 1) excavation, ex-situ stabilization and disposal in CAMU for TOL concentrations >2 mg/kg in soil; 2) in-situ stabilization for lead in soil and file a deed notice afterwards; 3) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; 4) in-situ geochemical stabilization for arsenic groundwater concentrations >60 ug/L using direct injection and/or reactive barrier wall; and 5) MNA and file a CEA for groundwater.

SWMU No. 30 consists of the area located along the western edge of the North Field and is used for the temporary (less than 90 days) storage of hazardous and potentially hazardous waste. It was identified as a solid waste management unit based on potential releases that might have included small volume leaks and spills from the 55-gallon drums and dumpsters stored in this area. The corrective measures for the contaminated media are: 1) filing of a deed notice for benzo(a)pyrene (BAP) concentrations <10 mg/kg and >0.66 mg/kg; and 2) NFA proposed for groundwater.

SWMU No. 31 consists of the Effluent Treatment Plant (ETP). The ETP was in operation since 1977 until process operations ended to provide treatment to process waste or wastewater generated from the process areas and to recover recyclable material before discharge of treated wastewater to Woodbridge Creek. The treatment units utilized included an Induced Air Floatation (IAF) Unit, an Equalization Tank, a Rotating Biological Contactors System, Clarifier Tanks and a Post-aeration Tank. The corrective measures are: 1) in-situ stabilization for lead in soil and file a deed notice afterwards; 2) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 3) NFA is proposed for groundwater.

SWMU No. 32 consists of the former PCB Waste Storage Building. The unit was located in the warehouse in the East Yard area. Limited amounts of PCBs were generated when transformers were cleaned. None of the 27 wipe samples collected and analyzed for PCBs showed concentrations of PCBs that require further action. NFA is proposed for both soil and groundwater.

SWMU No. 34 consists of the Dumpster Area and ditches. In 1983, a leaking dumpster was observed in the Central Yard area. The dumpster contained a catalyst from the Sulfur Recovery Unit. The spill was collected by absorbants. There were two drainage ditches near the Dumpster Area. One flowed along the southern side of the Dumpster Area and the other flowed along the western side of the Dumpster Area. The corrective measures are: 1) excavation, ex-situ stabilization and disposal in CAMU for TCLP lead levels >5 mg/L and benzo(a)pyrene concentrations >10 mg/kg in soil; 2) in-situ stabilization for TCLP lead levels <5 mg/L and lead levels >800 mg/kg in soil, as well as lead concentrations >50 ug/L in groundwater, and file a deed notice afterwards; 3) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 4) file a deed notice for soils with benzo(a)pyrene concentrations <10 mg/kg and >0.66 mg/kg; and 5) MNA and file a CEA for groundwater.

SWMU No. 35 consists of the No. 4 separator impoundment. The unit was a surface impoundment used for oil/water separation. The unit is located west of the ETP and between Tanks 327 and 330. The corrective measures are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 3) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; 4) ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if required; and 5) MNA and file a CEA for groundwater.

SWMU No. 36 is an earthen impoundment used for oil/water separation, located between the East Yard Basin (SWMU 3) and the Arthur Kill. The impoundment measured approximately 200 feet long by 120 feet wide with an associated feeder ditch along the south side. The unit discharged to the Arthur Kill and was operational from the late 1940's to 1974. No records are available and usage pre-dated refinery release records. The corrective measures for the contaminated media are: 1) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 2) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 3) NFA is proposed for groundwater.

SWMU No. 38 consists of the area located in the northwest section of the North Field and which partially overlaps the northern end of SWMU 30. SWMU 38 was an open earthen impoundment that was identified on aerial photographs dated from 1947 to 1954. The type of waste SWMU 38 contained is unknown. The original unit was roughly elliptical in shape, measuring approximately 75 feet by 250 feet along its minor and major axes. However, the investigation area was expanded to a 125 foot by 250 foot rectangle to account for irregularities in the shape of the unit. The corrective measures for the contaminated media are: 1) excavation, ex-situ stabilization and disposal in CAMU for BAP concentrations >10 mg/kg in soil; 2) file a deed notice for soils with benzo(a)pyrene concentrations >0.66 mg/kg; and 3) NFA for groundwater granted on January 21, 2005.

SWMU No. 39 consists of an unnamed North Field Pond, which is an irregularly shaped area visible in several aerial photographs. This area was reportedly used as a landfarm for tank bottoms sludge (non-leaded) in the late 1960's. The corrective measures for the contaminated media are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 3) in-situ stabilization for lead in soil and file a deed notice afterwards; 4) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 5) further evaluation of the groundwater.

SWMU No. 40 is a former surface impoundment that was used to manage process water and stormwater located near Tank 306. This impoundment was operational prior to 1940 through approximately 1967, and possibly to 1974. An oil/water separator was used in conjunction with the Old Pond. The oil/water separator recovered oil in a rectangular box and suspended solids settled in the pond. The pond was nearly circular with a diameter of approximately 175 feet. Tank 306 is currently in service for storage of sodium hydrosulfide (NaHS), and has historically held gasoline products. Minor amounts of LNAPL were found at three isolated locations in SWMU 40, approximately 60 feet apart. LNAPL is found primarily in lenses of highly porous and permeable catalyst beads that are contained within the low permeability clay fill. The corrective measures for the contaminated media are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) excavation, ex-situ stabilization and disposal in CAMU for BAP concentrations >10 mg/kg in soil; 3) in-situ geochemical stabilization for arsenic groundwater concentrations >60 ug/L using direct injection and/or reactive barrier wall; and 4) MNA and file a CEA for groundwater.

SWMU No. 41 consists of a 200 foot by 400-foot bermed, at-grade impoundment located in the North Field along Woodbridge Creek. The unit is a sludge drying area that appears in aerial photographs dating from 1952 through 1967, and appears in a 1974 aerial photograph. Presently, the area is occupied by the ETP. Gravel surface surrounds the ETP structures. Several pipes run between the structures that prevent accessibility to some portions of the unit. SWMU 41 may have been used for storage of oily sludges and may be the source of LNAPL within this area. LNAPL was encountered in temporary well point HP-0081 along the northern edge of ETP Tank 9200 within SWMU 41 and area was identified a LNAPL area. The corrective measures for the contaminated media are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) in-situ stabilization for lead in soil; 3) file deed notice for BAP <10 mg/kg and >0.66 mg/kg; 4) a cap for arsenic in soil >20 mg/kg; and 5) MNA and file a CEA for groundwater.

SWMU No. 42 consists of a crude concrete slab of approximately 25,000 square feet, slightly below grade, that supports a mostly above ground network of petroleum pipeways that have been in operation since 1973. There have been historic spills/releases. Of particular note was a 420 gallon heavy oil discharge from a failed 12 inch diameter pipeline that was removed and disposed of off-site. Some product was released into the adjacent soil. AST 750, located just southeast of SWMU 42 historically stored gas and naphtha. In addition, Bulk Station Gasoline Pumps were located south of SWMU 42. This area is now considered PAOC 20 and is part of SWMU 42 and its associated LNAPL area. The SWMU 42 LNAPL area is bounded by the AOC 16 Investigation Area EY1 LNAPL Area and the East Yard Crude Slab to the north, Tank 750 to the east, the Bulk Station Gasoline Pump to the south, and the vacant Administration Building to the west. The LNAPL plume associated with SWMU 42 covers approximately 25,000 square feet at a thickness ranging from <0.01 feet to 0.3 feet. The area was first identified in 2001 during the first-phase RFI when LNAPL was noted in a temporary well point. Odors and staining were observed in the fill in the majority of the temporary piezometers installed in SWMU 42. The corrective measures for the contaminated media are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) in-situ stabilization for TCLP lead levels <5 mg/L and lead levels >800 mg/kg in soil, as well as lead concentrations >50 ug/L in groundwater, and file a deed notice afterwards; 3) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; 4) ISCO treatment for benzene concentrations >100 ug/L in groundwater supplemented by enhanced bioremediation, if required; and 5) MNA and file a CEA for groundwater.

SWMU No. 43 consists of a below grade surface impoundment that was in operation between 1955 and 1975. The specific wastes managed in the unit are unknown. Dredged material from the Surge Pond (SWMU 2), the No. 4 Separator (SWMU 35) and Old Pond (SWMU 40) may have been placed in this unit in late 1956 or early 1957. Also, the area appears designed to manage oily stormwater and process water. SWMU 43 was also used as a spent catalyst disposal area in the mid-1950s. During the course of its usage, SWMU 43 received RCRA-listed hazardous wastes F037, F038, K051, and K052. The impoundment was taken out of service and filled in 1977. SWMU 43 is approximately 61,974 square feet where two former waste ponds once existed beneath the existing concrete pad and beyond. Historical photos show the presence of an earthen wall that surrounds and separates the mudflats into two ponds. The SWMU 43 LNAPL Area is the result of different sludge disposal activities at SWMU 43. These sludges may have originated from the oil water sewer system, tank bottoms, and other sources. Based on laboratory analysis, the LNAPL is a mixture of crude oil, gasoline, and diesel. The corrective measures for the contaminated media are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) in-situ stabilization for lead in soil, install a non-RCRA cap, and file a deed notice afterwards; 3) continue LRMs for groundwater, until all the LNAPL is removed to the extent practicable; and 4) MNA and file a CEA for groundwater.

SWMU No. 44 is located in the Main Yard, under the present position of the utility plant and control house and various pipe trenches. The location and size of the unit are based upon aerial photographs, which show the unit to be approximately 245 feet long by 200 feet wide at the narrow end, and 350 feet wide at the wider end. It appears to be a below grade earthen impoundment that may have been used for the management of process water and stormwater. The impoundment operated from prior to 1932 to 1950. The waste products are oily process water and stormwater. The corrective measures are: 1) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 2) NFA is proposed and granted for groundwater.

SWMU No. 45, also called the "Kidney Pond", is a below grade earthen impoundment of approximately 150 feet by 50 feet with a partial dike in the middle. SWMU 45 was constructed sometime in the mid-1950s and was shut down between 1974 and 1977. Operational history is unknown and predates release records but the impoundment probably handled oil/sludges from the OWS (SWMU 36) or its associated ditch. Historic waste volumes are unknown. SWMU 45 has been grouped with SWMU 3 (East Yard Basin), which has been closed under NJDEP supervision, and is being monitored by

NJDEP (see SWMU 3 discussion). Chevron is currently performing groundwater monitoring of the closure wells, and is in the process of filing a deed notice with conditional NFA. Post closure care will be implemented under a Remedial Action permit to be issued by NJDEP.

SWMU No. 51 was constructed in 1990 and consists of an Oily Soil Pad. This unit is an asphalt pad located in the Main Yard south of Tank 311. This unit is used for the temporary staging of non-hazardous soil excavated as the result of onsite spill responses, or that is encountered during onsite construction and demolition activities. The unit is underlain by a polyethylene liner and equipped with a valve accessed catch basin for the collection and control of stormwater. The catch basin drains to the oily water sewer system. It has been determined that no hazardous wastes are managed at the SWMU. NFA is proposed and granted for groundwater. Further evaluation of soil is still necessary.

SWMU No. 52 is a potential TEL Burial Area Southwest of Tank 13. Since there were no exceedances of the applicable NRDCSCC and NRDCSRS in any analytic results of soil samples, it does not appear that this location was used for disposal of TEL wastes. Therefore, no further action for soils at SWMU 52 was recommended in the November 2003 RFI Report. Groundwater conditions at SWMU 52 were investigated during the CMS and showed no exceedances. Additionally, no LNAPL is present within this SWMU. NFA is proposed for both soil and groundwater.

SWMU 53 consists of the area located to the south and east of the concrete splash pad of Tank Basin 312 in the North Field and was identified as a solid waste management unit based on training fires set in the Fire Fighting Training Grounds (FFTG). The FFTG were fueled with naphtha, which may have become entrained in the water used to extinguish the fires. The naphtha-laced water was drained and discharged into Tank Basin 312, then to the OWSS and to the ETP for treatment. The corrective measures for contaminated media are: 1) filing a deed notice for BAP concentrations < 10 mg/kg and > 0.66 mg/kg in soil; and 2) NFA is proposed for groundwater.

(b) AOCs:

AOC No. 1 consists of a potential discharge from Tank 1, which is located in the Main Yard immediately north of Maurer Road. Tank 1 was dismantled in 2002. During the demolition of Tank 1, petroleum stained soils were identified under the northern half of Tank 1. Approximately 330 cubic yards of impacted soil were removed. Post-excavation samples were collected following remedial action activities. Sample analysis detected arsenic in one of the post-excavation samples at a concentration of 22.1 mg/kg, above the

NRDCSCC. Analysis of additional groundwater samples collected at MW-133 showed benzene levels below the method detection limit (0.5 ug/L). Additional sampling and analysis is necessary to determine whether NFA is achieved. If additional remediation is needed for this AOC, the permittee will use any appropriate remedial methods approved in this permit for other parts of the site to achieve the cleanup levels.

AOC No. 2 consists of a potential discharge from Tank 3, located in the Main Yard immediately north of Maurer Road. During demolition of Tank 3, stained soils were noted beneath the northern portion of the tank floor. Approximately 600 cubic yards of stained soils and rail ties were excavated from this area. Petroleum impacted soils were remediated using excavation and off-site disposal. No exceedances of the applicable regulatory criteria/standards were identified in analyses of post excavation soil and groundwater samples. NFA is proposed for both soil and groundwater.

AOC No. 3 consists of a potential discharge from Tank 4. Slightly higher and sporadic exceedences of benzo(a)pyrene were observed in soil. Additional sampling and analysis, and soil removal are necessary to determine whether NFA is achieved. If additional remediation is needed for this AOC, the permittee will use any appropriate remedial methods approved in this permit for other parts of the site to achieve the cleanup levels.

AOC No. 5 was identified during the excavation of the UGST E3, when the Permittee observed a petroleum substance. The petroleum substance appeared to be related to material observed near Well MW-13. The corrective measures are: 1) in-situ stabilization for lead in soil and file a deed notice afterwards; 2) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 3) further evaluation of the groundwater.

AOC No. 6A contains oily petroleum material observed at borings B-26 and B-34 and at piezometer P-2. During field activities in 1991 for installing groundwater monitoring wells and piezometers, petroleum material was observed at eight borings. The corrective measures at AOC 6A are: 1) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; 2) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; and 3) further evaluation of the groundwater.

AOC No. 6B was identified during field activities between September through October 1991 while installing groundwater monitoring wells and piezometers. Petroleum material was observed at eight borings. The corrective measures are: 1) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; and 2) further evaluation of the groundwater.

AOC No. 6C was identified during field activities between September through October 1991 while installing groundwater monitoring wells and piezometers. Petroleum material was observed at two borings. The corrective measures are: 1) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; and 2) further evaluation of the groundwater.

AOC No. 7 consists of tar-like material detected at groundwater monitoring well MW-13. Based on soil and groundwater modeling of PCOC, no exceedences were demonstrated. The corrective measures are further evaluation of the soil and groundwater.

AOC No. 8 consists of oily and tar-like material detected at borings B-27 and B-28. The Permittee notified NJDEP. The corrective measures are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if required; and 3) MNA and file a CEA for groundwater.

AOC No. 9A consists of contamination detected at groundwater monitoring well NF-10. The corrective measures are: 1) NFA for soil; 2) ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if required; and 3) MNA and file a CEA for groundwater.

AOC No. 9B consists of contamination detected at groundwater monitoring well NF-11. The Permittee notified NJDEP of the detection of volatile organic compounds. The corrective measures are: 1) NFA for soil; and 2) MNA and filing a CEA for groundwater.

AOC No. 10 consists of stained soil and gravel observed during the visual site inspection (VSI) in the area of the IAF tank, Tank 723. In 1989, the Permittee extended the concrete pad below Tank 723. Soil and gravel were removed to depths ranging from 10 to 20 inches, including all visibly stained soil and gravel. The corrective measures are: 1) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 2) NFA is proposed for groundwater.

AOC No. 13 consists of the B-11 Oily Fill Area (GWQAP Area 1). This area is based on oily fill material identified in a soil boring located in the East Yard. The corrective measures are: 1) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 2) further evaluation of the groundwater.

AOC No. 14 consists of GWQAP Oily Fill Area III. Oily fill was observed in soil borings B-9, B-10, B-12, B-17, B-18 and B-19 in the East Yard. The corrective measures are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 3) in-situ stabilization for lead in soil and file a deed notice afterwards; 4) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; 5) in-situ geochemical stabilization for arsenic groundwater concentrations >60 ug/L using direct injection and/or reactive barrier wall; and 6) MNA and file a CEA for groundwater.

AOC No. 15 consists of an oil release at Buckeye Pipeline Manifold. An unknown quantity of oil was released at the location of the Buckeye pipeline manifold at the corner of Creek and Barber Streets. Some oil was recovered. Reports indicate that oil is present on the surface of water that collects in a gravel filled area in the vicinity of the release. The corrective measures are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if required; 3) and MNA and file a CEA for groundwater.

AOC No. 16A in the Main Yard consists of the Oily Water Sewer System (OWSS). The OWSS was used to convey process waste and waste waters generated from process areas to the ETP (SWMU No. 31). The OWSS extends throughout the previously active areas of the refinery and was integral to its operations. The corrective measure are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) excavation, ex-situ stabilization and disposal in CAMU for BAP concentrations >10 mg/kg; 3) in-situ stabilization for lead in soil and file a deed notice afterwards; 4) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 5) ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if required; and 6) MNA and file a CEA for groundwater.

AOC No. 16B is the East Yard area. The corrective measures are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) excavation, ex-situ stabilization and disposal in CAMU for BAP concentrations >10 mg/kg and TCLP lead levels > 5 mg/L in soil; 3) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 4) in-situ stabilization for TCLP lead levels <5 mg/L and lead levels >800 mg/kg in soil, as

well as lead concentrations >50 ug/L, and file a deed notice afterwards; 5) ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if required; 6) in-situ geochemical stabilization for arsenic groundwater concentrations >60 ug/L using direct injection and/or reactive barrier wall; and 7) MNA and file a CEA for groundwater.

AOC No. 16C is the Central Yard. The corrective measures are: 1) file a deed notice for soils with BAP concentrations <10 mg/kg and >0.66 mg/kg; 2) excavation, ex-situ stabilization and disposal in CAMU for BAP concentrations >10 mg/kg in soil; 3) ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if required; and 4) MNA and file a CEA for groundwater.

AOC 17 consists of Tank Basin 20 located in the Main Yard. The area was identified as an AOC based on an EPA site visit in August 1994 and subsequent Chevron notification concerning possible contamination, dated September 19, 1994. The corrective measures are: 1) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 2) further evaluation of the groundwater.

AOC 18 consists of Tank Basin 2 located in the Main Yard. The area was identified as an AOC based on the observation of petroleum impacted soils during the demolition of Tank 2. Petroleum impacted soils were remediated using excavation and off-site disposal. Analysis of post excavation soil samples collected at AOC 18 showed no exceedances of the applicable regulatory criteria/standards. Groundwater modeling of PCOCs within this AOC demonstrated no exceedances of the GWQS. NFA is proposed for both soil and groundwater.

AOC 19 consists of the above ground product pipeway located in the Main Yard. The area was identified as an AOC due to the identification of oil stained soil in the pipeway containment earthen trench. A LNAPL area is located in the eastern portion of this AOC. The corrective measures are: 1) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; 2) continue LRMs for groundwater; and 3) further evaluation of the groundwater.

AOC 21 is located near the corner of Maurer Road and State Street, adjacent to the former Bulk Station. The area was identified as an AOC based on the identification of potentially contaminated soil encountered during excavation to locate and repair a leak in the Refinery Fire Water System. Analytical data from soil samples showed no exceedances of the applicable NRDCSCC and NRDCSRS. Soil is therefore not a source

of contamination to groundwater or to human and environmental receptors. Analyses of groundwater samples collected from temporary well points showed no exceedances of the GWQS, and analyses of groundwater samples from permanent monitoring well A21TP1 show no consistent exceedances of the GWQS. NFA is proposed for both soil and groundwater.

AOC 22 is located south of the Shops Building in the Central Yard. The area was identified as an AOC based on groundwater contamination identified during the removal of an underground storage tank in December 1995. The corrective measures are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; 3) ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if required; and 4) MNA and file a CEA for groundwater.

AOC 23 consists of Tank Basin 327 in the North Field. The area was identified as an AOC in 1996 when petroleum impacted soil and groundwater were observed in excavation pits while Chevron was installing foundations for above ground piping. The corrective measures are: 1) excavation, ex-situ stabilization and disposal in CAMU for TCLP lead levels > 5 mg/L and TOL concentrations >2 mg/kg in soil; 2) in-situ stabilization for TCLP lead levels <5 mg/L and lead levels >800 mg/kg in soil and file a deed notice afterwards; 3) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 4) ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if required; and 5) MNA and file a CEA for groundwater.

AOC 24 is located northwest of Tank 4 in the Main Yard. The area was identified as an AOC based on a small localized area of petroleum contaminated soil that was identified at the fire hydrant located in this area. No exceedances of the applicable criteria were detected in analytic results of soil samples. The corrective measures are: 1) further evaluation of soil data is necessary; and 2) NFA for groundwater which was granted on January 21, 2005.

AOC 25 consists of a release at the location of the former cat cracker in the Central Yard. This AOC is a confirmed LNAPL area. The corrective measures are: 1) continue LRMs for groundwater, until all the LNAPL is removed to the extent practicable; 2) ISCO or enhanced bioremediation for benzene concentrations are greater than 100 ppb; 3) MNA and file a CEA for groundwater; and 4) NFA is proposed for soil.

AOC 26 consists of the East Yard Bunker Slab located in the East Yard within the footprint of the EY4b LNAPL area. The corrective measures are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; 3) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; and 4) NFA is proposed for groundwater.

AOC 27 consists of an above ground product pipeway located within Tank Basin 777 in the East Yard. The area was identified as an AOC in October 1998 during a cleanup effort related to a No. 2 fuel oil release. The corrective measures are: 1) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; and 2) further evaluation of the groundwater.

AOC 28 is located in the footprint of former Tank 719 in the East Yard. It was designated as an LNAPL area after LNAPL was detected in a temporary well point installed during the 1st-Phase groundwater investigation. The corrective measures are: 1) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 2) NFA for groundwater which was granted on January 21, 2005.

AOC 29 is located in the 5 Berth Area in the East Yard, which was identified as an AOC based on the presence of solid asphalt-like material and LNAPL in the area. This AOC is a confirmed LNAPL area. The corrective measures are: 1) excavation, ex-situ stabilization and disposal in the CAMU for BAP concentrations >10 mg/kg in soil, followed by completion of a revetment system at the former 5 Berth area; and 2) filing of a deed notice.

AOC 30 consists of the Tank 27 pipeway located in the Central Yard. This area was identified as an AOC due to the observance of stained soils in the area. Petroleum impacted soils have been removed from AOC 30, and post excavation sampling analytic results showed no exceedances of the applicable NRDCSCC and NRDCSRS. Analyses of samples collected from MW-130 have shown no exceedances of the GWQS for VOCs and SVOCs, and intermittent exceedances for metals. NFA is proposed and granted for both soil and groundwater.

AOC 31 is located in the vicinity of a former pump within Tank Basin 772 in the East Yard. The area was identified as an AOC when stained soils were observed during re-grading activities conducted within the tank basin. This AOC is a confirmed LNAPL area. The corrective measures are: 1) electrical resistance heating (ERH) and soil vapor

extraction (SVE) for organic contaminants in soil, contaminated groundwater and LNAPL; 2) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 3) in-situ stabilization for lead in soil and file a deed notice afterwards; and 4) ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if required, until all the LNAPL is removed to the extent practicable.

AOC 32 consists of Tank Basin 16 located in the Central Yard. There were no exceedances of the applicable regulatory soil criteria/standards in any of the analytic results of soil samples. Soils are not a source of contamination to groundwater or human and other environmental receptors. Groundwater modeling of PCOCs within AOC 32 demonstrated no exceedances. NFA is proposed for both soil and groundwater.

AOC 33 consists of Tank Basin 314 located in the Main Yard. The area was identified as an AOC in 2000 based on an apparent release from a leak in the tank. The corrective measures are: 1) in-situ stabilization for lead in soil and file a deed notice afterwards 2) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 3) MNA and file a CEA for groundwater.

AOC 34 consists of Tank Basin 315 located in the Main Yard. The area was identified as an AOC in 2000 based on an apparent release noted in inspection records. The corrective measures are: 1) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; and 2) further evaluation of the groundwater.

AOC 35 consists of Tank Basin 771 located in the East Yard. Tank 771 is constructed of welded steel rings with a steel bottom plate. Tank 771 has a diameter of 150 feet, a height of 48 feet, and a capacity of 150,000 bbls. Tank 771 has been used to store crude oil. With the exception of two slight exceedances of arsenic in soil, there are no exceedances of the applicable NRDCSCC and NRDCSCS. There have been no impacts to groundwater in the vicinity of AOC 35. The corrective measures are: 1) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; and 2) NFA is proposed and granted for groundwater. Further evaluation of soil is still necessary.

AOC 36 is located in the southern portion of the Central Yard. The area was identified as an AOC based on the detection of chlorinated hydrocarbons in groundwater during the RFI. The corrective measures are: 1) enhanced in-situ bioremediation including bioaugmentation for 1,1-DCE and TCE greater than 100 ug/L in on-site groundwater; 2) in-situ geochemical stabilization for arsenic groundwater concentrations >60 ug/L using direct injection and/or reactive barrier wall; and 3) MNA and file a CEA for groundwater.

AOC 37 is located at the East Yard Gasoline Filters. The area was identified as an AOC based on the results of a Potential Area of Concern (PAOC) site investigation conducted in December 2002. The corrective measures are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) in-situ stabilization for lead in soil and file a deed notice afterwards; and 3) further evaluation of the groundwater.

AOC 38 is located at the barge loading manifold and the G180/181 naphthapumps in the East Yard. The area was identified as an AOC based on the results of a PAOC site investigation conducted in November, 2002. The corrective measures are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 3) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 4) further evaluation of the groundwater.

AOC 39 is located at the former East Yard Pump House and the PRC Loading Rack in the East Yard. The area was identified as an AOC based on the results of a PAOC site investigation conducted in December, 2002. The corrective measures are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; and 3) further evaluation of the groundwater.

AOC 40 is located at Tank Basin 22 in the Central Yard. The area was identified as an AOC based on the results of a PAOC site investigation conducted in November 2002. The corrective measures are: 1) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; 2) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; and 3) further evaluation of the groundwater.

AOC 41 is located at Tank Basin 300 in the North Field. The area was identified as an AOC based on the results of a PAOC site investigation of the area conducted in May, 2003. The corrective measures are: 1) ISCO treatment for benzene in soil, supplemented by enhanced bioremediation, if required; 2) in-situ stabilization for lead in soil and file a deed notice afterwards; 3) excavation, ex-situ stabilization and disposal in CAMU for TEL concentrations >2 mg/kg in soil; 4) ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if required, until all the LNAPL is removed to the extent practicable; and 5) MNA and file a CEA for groundwater.

AOC 42 is located at Tank Basin 310 in the Main Yard. The area was identified as an AOC based on the results of a PAOC site investigation conducted in December 2002. Soil and groundwater modeling demonstrated no exceedances. Additional sampling and analysis is necessary to determine whether NFA is achieved.

AOC 43 is located at Tank Basin 311 in the Main Yard. The area was identified as an AOC based on the results of a PAOC site investigation conducted in December 2002. The corrective measures are: 1) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 2) NFA is proposed for groundwater.

AOC 44 is located at Tank Basin 313 in the North Field. The area was identified as an AOC based on the results of a PAOC site investigation of the area conducted in November 2002. The corrective measures are: 1) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; 2) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 3) continue LRMs for groundwater; 4) ISCO treatment for benzene concentrations >100 ug/L in groundwater, supplemented by enhanced bioremediation, if required; and 5) MNA and file a CEA for groundwater.

AOC 45 is located at Tank Basin 748 in the East Yard. The area was identified as an AOC based on the results of a PAOC site investigation conducted in November 2002. The corrective measures are: 1) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 2) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 3) further evaluation of the groundwater.

AOC 46 is located at Tank Basins 749 and 780 in the East Yard. The area was identified as an AOC based on the results of a PAOC site investigation conducted in November 2002. The corrective measures are: 1) ISCO treatment for organic contaminants in soil, supplemented by enhanced bioremediation, if required; 2) excavation, ex-situ stabilization and disposal in CAMU for TCLP lead levels > 5 mg/L; 3) in-situ stabilization for TCLP lead levels <5 mg/L and lead levels >800 mg/kg in soil and file a deed notice afterwards; 4) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; 5) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 6) further evaluation of the groundwater.

AOC 47 is located at the former No. 4 Crude Unit in the Main Yard. The area was identified as an AOC based on the results of a PAOC site investigation conducted in November 2002. The corrective measures are: 1) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; 2) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; and 3) further evaluation of the groundwater.

AOC 48 is located at the former Isomax Process Plant in the Main Yard. The area was identified as an AOC based on the results of a PAOC site investigation conducted in November 2002. The corrective measures are: 1) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; and 2) MNA and file a CEA for groundwater.

AOC 49 is located at the former #3 Rheniformer in the Main Yard. The area was identified as an AOC based on the results of a PAOC site investigation conducted in December 2002. The corrective measures are: 1) filing of a deed notice for BAP concentrations <10 mg/kg and >0.66 mg/kg; 2) containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil; and 3) further evaluation of the groundwater.

AOC 50 is an AOC located at the former location of the Bulk Station, which was identified as PAOC 90 in the PAOC investigation initiated in 2002. An RFI investigation is required to characterize the AOC.

Portion of Woodbridge Creek adjacent to the facility. The Permittee completed investigations of surface water and sediments in Woodbridge Creek as part of the RFI. This component of the investigation was reported in the baseline ecological evaluation of the RFI. Completion of the RFI for Woodbridge Creek is required.

Portion of Spa Spring Creek adjacent to the facility. The Permittee completed investigations of surface water and sediments in Spa Spring Creek in the RFI. This component of the investigation was reported in the baseline ecological evaluation of the RFI. Completion of the RFI for Spa Spring Creek is required.

Portion of the Arthur Kill adjacent to the facility. The Permittee completed investigations of surface water and sediments in the Arthur Kill as part of the RFI. This component of the investigation was reported in the baseline ecological evaluation of the RFI. Completion of the RFI is required to characterize the AOC.

Notes:

1) SWMUs Nos. 4, 23, 33, 37, 54-62, and AOCs 4 and 20 were located in the Amboy Field and West Yard areas. They are not included in Attachment A because remediation was completed under the 1994 Permit. Chevron remains entirely responsible under NJDEP oversight for implementing institution and engineering control and institutional control under NJDEP's Soil Remedial Action permits. Chevron will continue to address the groundwater issues in Amboy Field and the West Yard Area areas.

2) SWMUs Nos. 46-50 and AOCs 11 and 12 are not included in Attachment A because they are located in the Northern Parcels section of the North Field Extension, which will be subject to remediation by new owners under a RCRA Section 7003 Consent Order to be issued concurrently with this permit renewal.

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3. Corrective Action Management Unit (CAMU)

A CAMU will be located within the facility as a permanent disposal repository for remediation waste (such as contaminated soil and debris) from implementation of the remedial actions performed by the Permittee under this permit. A proposed CAMU, which meets all decision criteria, has been approved under the permit. Federal regulations authorize the designation of one or more areas of a RCRA-regulated facility as a CAMU (40 CFR 264.552). A CAMU may be implemented pursuant to a RCRA permit. The CAMU at the Facility will be designed, constructed, and used in accordance with federal CAMU regulations (40 CFR 264.552). Specifically, the CAMU is designed to address the seven decision criteria outlined in 40 CFR 264.552(c):

(1) The CAMU is designed to facilitate the implementation of reliable, effective, protective and cost-effective remedies at the facility.
(2) Unacceptable risks from exposure to hazardous wastes or hazardous constituents will not be associated with waste management activities at the CAMU.
(3) The CAMU will only include uncontaminated areas of the Facility if management of CAMU-eligible wastes is more protective than management of such wastes at contaminated areas.
(4) After closure of the CAMU, the areas of the CAMU will be managed so as to minimize future releases to the extent practicable.
(5) The availability of the CAMU will expedite implementation of corrective measures.
(6) Through appropriate technologies, the CAMU will enhance the long term effectiveness of corrective measures by reducing toxicity or volumes of wastes.
(7) The CAMU will minimize the land area of the Facility where wastes will remain in place.

In addition to the disposal CAMU, two existing areas within the facility, designated as the Primary Staging and Treatment Area and the Secondary Staging and Treatment Area, are to be used during operation of the CAMU for temporary storage and treatment of remediation waste prior to its disposal in the CAMU. No waste will remain in these two areas after closure. Federal regulations authorize the designation of an area of a RCRA-regulated facility as a CAMU for storage and/or treatment only (40 CFR 264.552(f)). These two storage and/or treatment only areas are to operate for no more than two years. The two-year operating time periods will run independently or consecutively for each of the two treatment areas, and that the two-year period starts from the date of initial operation of each treatment area. Appendix D of this permit contains detailed information and requirements applicable to the CAMU.

4. Implementation Schedule.

Permittee shall submit a Correction Action Implementation schedule within 90 days of the effective date of the permit.

5. Planned Facility Alterations or Additions at SWMUs or AOCs

The permittee shall give notice to the Director within 60 days of any planned physical alterations or additions to the permitted facility in accordance with Module 1, Condition F.11. Additionally, if the alteration or addition will be conducted in a contaminated SWMU or AOC listed in this permit, the permittee shall also provide the Director with a description of how the SWMU or AOC or relevant portion thereof, will be remediated to accommodate for the planned addition or alteration. To allow for the planned addition or alteration, the permittee may use excavation or other corrective action technologies approved under this permit to address the contaminated relevant SWMU or AOC. The description of the corrective measures must also include a post corrective action monitoring plan.

C. STANDARD CONDITIONS FOR CORRECTIVE ACTIONS

1. Workplans. All workplans submitted pursuant to this Module shall include: (a) Quality Assurance/Quality Control protocols to ensure that data generated is valid and supported by documented procedures; (b) other plans, specifications and protocols, as applicable; (c) a schedule for starting specific tasks, completing the work and submitting interim and final reports; and (d) plans for the treatment, storage, discharge or disposal of wastes to be generated by activities described therein.

2. Monitoring and Records. Requirements for monitoring and records shall be in accordance with the Conditions of Module I of this Permit.

3. Health/Safety Plans. The Permittee shall develop, according to applicable Federal, and local requirements, and submit to EPA, health and safety plans that will be implemented to ensure that the health and safety of project personnel, plant personnel and the general public are protected. These plans are not subject to approval by EPA.

4. Guidance Documents. When preparing the submissions described in this Module, the Permittee shall consider applicable guidance documents issued by EPA.

5. Prior Submittals. The Permittee may have already submitted portions of information, plans, or reports required by this Permit Module to EPA pursuant to the terms of previous applications, or the 1994 Permit. For those items the Permittee contends it has already submitted to EPA, the Permittee may cite the specific document(s) and page(s) it believes adequately addresses each of the individual items requested by this Permit Module and its Appendices. The references, by document and page, shall be placed in the appropriate sections of the submittals that require the referenced information and data. If EPA, after a file search, determines that it does not possess any of the referenced information, plans, or reports that the Permittee claims were previously submitted, EPA will notify the Permittee and the Permittee shall submit the referenced documents within the time frame specified. EPA will decide whether any such information, plans and/or reports adequately address the required information.

6. New Interim Corrective Measures (ICM)

(a) In the event the Permittee identifies a release or potential release of hazardous waste and/or hazardous constituents that poses a threat or potential threat to human health or the environment, or the Permittee becomes aware of a situation where it would be appropriate to prevent or minimize the further spread of contamination while long-term remedies at the Facility are pursued, the Permittee shall immediately notify EPA orally and shall notify EPA in writing within ten (10) days of such identification, summarizing the condition and the ICM being considered.

(b) If EPA determines that a release or potential release of hazardous waste and/or hazardous constituents at the Facility poses a threat or potential threat to human health or the environment, or if EPA identifies a condition at the Facility where it would be appropriate for the Permittee to implement ICM(s) to prevent or minimize the further spread of contamination while long-term remedies at the Facility are pursued, EPA will notify the Permittee in writing specifying the basis for EPA's determination; including but not limited to changes in sea level, floodplain mapping, as well as frequency and intensity of major storms.

(c) The following factors may be considered by EPA in determining the need for interim measures:

(i) Time required to develop and implement a final remedy;

(ii) Actual and potential exposure of human and environmental receptors;
(iii) Actual and potential contamination of drinking water supplies and sensitive ecosystems;
(iv) The potential for further degradation of a medium absent interim measures;
(v) Presence of hazardous waste, including hazardous constituents, in containers that may pose a threat of release;
(vi) Presence and concentration of hazardous waste, including hazardous constituents, in soils that have the potential to migrate to groundwater or surface water;
(vii) Weather and climatic conditions that may affect the current levels of contamination. This includes, but is not limited to, changes in sea level, flood plain mapping, and frequency and intensity of major storms;
(viii) Risks of fire, explosion, or potential exposure to hazardous waste, including hazardous constituents, as a result of an accident or failure of container or handling system; and
(ix) Other situations that may pose threats to human health and the environment.

(d) Within forty-five (45) calendar days of first notifying EPA pursuant to Section C.6 (a) of this Module, or within forty-five (45) calendar days of receipt of notification from EPA pursuant to Section C.6 (b) of this Module, the Permittee shall submit to EPA for review, comment, and approval an ICM plan. The ICM plan shall consider, among other relevant factors, the character, extent, direction, rate of release, proximity to population, exposure pathways, effects of delayed action, and evaluations of appropriate ICMs. The ICMs must be consistent with, and can be integrated into, any long-term corrective action at the facility.

(e) Within sixty (60) calendar days of approval of the ICM plan and selection of the ICM by EPA, the Permittee shall submit to EPA an ICM design plan. The ICM design plan shall include, but shall not be limited to, a description and design for the ICM and, if necessary, a monitoring program for measuring and reporting on the effectiveness of the ICM.

(f) Upon approval of the ICM design plan by EPA, the Permittee shall implement the plan as specified by EPA.

(g) If, after review of the ICM monitoring data, EPA determines that the ICM is not sufficient to achieve its goal, EPA may require the Permittee to implement enhancements to the ICM.

(h) Nothing herein shall preclude the Permittee from taking, at its own risk, immediate action where such action is required to address the conditions described herein, but it must promptly notify the EPA of such action.

7. Determination Of No Further Action

(a) Based on the results of the RFI for a particular SWMU (or combination of SWMUs) and other relevant information, the Permittee may submit an application to EPA for a Class III permit modification under 40 C.F.R. § 270.42(c) to terminate the subsequent corrective action requirements of this Module. This permit modification application must contain information demonstrating that there are no releases of hazardous wastes and/or hazardous constituents from SWMUs at the Facility that pose a threat to human health and the environment, as well as information required in 40 C.F.R. § 270.42(c).

If, based upon review of the Permittee's request for a permit modification, the results of the RFI or RFA and other information, including comments received during the sixty (60) day public comment period required for Class III permit modifications, EPA determines that the releases or suspected releases which were investigated either are non-existent or do not pose a threat to human health and the environment, EPA may grant the requested modification.

(b) A determination of no further action shall not preclude EPA from requiring the Permittee to perform continued or periodic monitoring of air, soil, groundwater, surface water or subsurface gas, if necessary to protect human health and the environment, when site-specific circumstances indicate that release(s) of hazardous waste or hazardous constituents may occur from a SWMU at the Facility.

(c) A determination of no further action shall not preclude EPA from requiring the Permittee to perform further investigations, studies, or corrective measures at a later date if new information or subsequent analysis indicates a release or likelihood of a release from a SWMU at the Facility may pose a threat to human health or the environment.

8. Reporting.

(a) The Permittee shall submit to EPA signed quarterly progress reports of all corrective action activities (i.e., SWMU Assessment, Interim Measures, RCRA Facility Investigation, Corrective Measures Study), beginning no later than sixty (60) calendar days following the effective date of this Permit, and subsequently every quarter thereafter. In addition, EPA and the Permittee may hold informal discussions to update the site status at anytime, including on a bi-monthly basis, as deemed appropriate. The quarterly reports shall contain:

(i) A description of the work completed, including, but not limited to, all preliminary (i.e., non-validated) analytical results obtained during the reporting period, lithologic logs of all soil borings and/or wells installed during that period, and well construction logs/diagrams for all wells completed during that period;
(ii) Summaries of all findings made during the reporting period, including summaries of laboratory data not included above;
(iii) Summaries of all changes made during the reporting period;
(iv) Summaries of all contacts made with representatives of the local community and public interest groups during the reporting period;
(v) Summaries of all problems or potential problems encountered during the reporting period and actions taken to rectify problems;
(vi) Changes in personnel conducting or managing the corrective action activities during the reporting period;
(vii) Projected work for the next reporting period; and
(viii) Copies of daily reports, inspection reports, validated laboratory/monitoring data, etc. generated during the reporting period.
(ix) Permittee shall submit a site-wide groundwater monitoring program

(b) Upon request, copies of any other data (e.g., inspection reports, sample collection field notes, etc.), not previously submitted pursuant to Section C.8(a) of this Module shall be made available to EPA.

(c) Based on information provided in the bimonthly progress reports required above, or upon other supporting information, EPA may require the Permittee to implement new or additional investigations and/or new or additional Interim Corrective Measures pursuant to Section C.6 of this module.

(d) All plans and schedules required by the conditions of this Permit Module and Attachments L and M, upon approval of EPA, are incorporated into this Permit by reference and become an enforceable part of this Permit. Any noncompliance with such approved plans and schedules shall be termed noncompliance with this Permit. Extensions of the due dates for submittals may be granted by EPA in accordance with the permit modification processes under 40 C.F.R. § 270.41.

9. Compliance with Governmental Requirements.

During investigative activities, interim corrective measures and final corrective measures (including, but not limited to, equipment decommissioning, excavation and unit demolition) required under this Module, the Permittee shall ensure that the transportation, treatment, storage, discharge, and disposal of all contaminated materials generated as a result of such activities (including, but not limited to, soils, sediments, liquids, tanks, pipes, pumps, rubble, and structural materials) are performed in an environmentally sound manner pursuant to all applicable federal, territorial and local requirements and that is protective of human health and the environment. Nothing in this Module shall be construed to require Permittee to proceed in a manner which is in violation of any such requirements.

10. Notifications

(a) Notification of Possible Off-Site Groundwater Contamination. If at any time the Permittee discovers that hazardous wastes and/or constituents in groundwater have been released from a SWMU or AOC at the Facility, and have migrated, or are migrating, beyond the Facility boundary in concentrations that exceed background levels, the Permittee shall:

(i) within ten (10) calendar days of discovery, provide written notice to EPA of the condition, and implement as required, all requirements given in Section C.6 of this Module; and

(ii) If requested by EPA, provide written notice to any person who owns or resides on the land which overlies the contaminated groundwater.

b) Notification of Surface Water Contamination. If at any time the Permittee discovers that hazardous wastes and/or constituents have been released from a SWMU or AOC at the Facility to surface waters, and have migrated, or are migrating, to areas beyond the Facility boundary in concentrations that exceed standards given at 40 C.F.R. § 141.61 and § 141.62, the Permittee shall,

(i) Within ten (10) calendar days of such discovery, provide written notification to EPA of the condition, and implement as required, all requirements given in Section C.6 of this Module; and

(ii) If requested by EPA, initiate any actions that may be necessary to provide notice to all individuals who have or may have been subject to such exposure.

(c) Notification of Residual Contamination. If hazardous wastes or hazardous constituents in SWMUs or AOCs, or which have been released from SWMUs or AOCs, will remain in or on the land, including groundwater, after the term of this Permit has expired, at concentrations that may pose an actual or potential threat to human health or the environment with a risk in the range of 10^{-4} to 10^{-6} or greater, EPA may require the Permittee to record, in accordance with New Jersey law, a notation in the deed to the Facility property or in some other instrument which is normally examined during title search that will, in perpetuity, notify any potential purchaser of the property of the types, concentrations, and locations of such hazardous wastes or hazardous constituents. EPA may require such notice as part of the corrective measures selection process.

(d) Notification of Air Contamination If at any time the Permittee discovers that hazardous constituents in the air have been released from a SWMU or AOC at the Facility and have migrated, or are migrating, to areas beyond the Facility boundary in concentrations that exceed relevant air standards, and that residences or other places at which continuous, long-term exposure to such constituents might occur are located within such areas, the Permittee shall immediately take measures to protect human health and the environment from such release. The Permittee shall also:

(i) Within ten (10) calendar days of such discovery, provide written notice to EPA; and

(ii) Initiate any actions that may be necessary to provide notice to all individuals who have or may have been subject to such exposure.

D. REQUIREMENTS FOR PERFORMING CORRECTIVE ACTION PHASES

Set forth below are the requirements for performing a RFI, CMS and CMI. These requirements are detailed further in Attachments L and M of this Permit. These standards apply to corrective action at known SWMUS, as well as newly discovered SWMUs, AOCs or releases.

1. RFI Workplan

(a) An RFI Workplan shall be submitted within ninety (90) calendar days following written notification by EPA that an RFI is required pursuant to this Module.

(i) The Workplan shall describe the objectives of the investigation and the overall technical and analytical approach to completing all actions necessary to characterize the nature, direction, rate, movement, and concentration of releases of hazardous waste, including hazardous constituents, from specific SWMUs or groups of SWMUs, and their actual or potential receptors. The Work plan shall detail all activities and procedures to be conducted at the Facility and/or off-site, the schedule for implementing and completing such investigations, the qualifications of personnel performing or directing the investigations, including contractor personnel, and the overall management of the RFI.

(ii) The Workplan shall discuss sampling, data collection strategy, methods of sample analysis, as well as quality assurance and data management procedures, including formats for documenting and tracking data and other results of investigations, and health and safety procedures.

(iii) The Workplan must, at a minimum, address all necessary activities or include descriptions to meet the requirements specified in Tasks I through V of the Scope of Work (SOW) for a RFI set forth in Attachment L to this Permit. Within thirty (30) calendar days of EPA's written notification that an RFI is required pursuant to this Module, the Permittee may request, in writing, that EPA review for approval the Permittee's determination that any or all items required by Task I through V of the SOW in Attachment L have been previously completed by a prior RFI submission, and/or may be omitted because they are unnecessary or unwarranted. EPA shall notify the Permittee in writing of its determination whether any or all items required by Task I through V of the Scope of Work have been previously completed, and/or may be omitted.

(b) Following submission of an RFI Workplan pursuant to Section D.1(a) of this Module, as modified by any determinations approved by EPA under Section D.1(a)(iii) of this Module, subsequent activities for the workplan shall proceed in accordance with the following schedule:

(i) EPA shall review the Workplan and either approve it or issue written deficiency comments.

(ii) A meeting between the Permittee and EPA to discuss the latter's deficiency comments, if desired by the Permittee, must be requested by the Permittee within thirty (30) calendar days of the date of EPA's written deficiency comments, and approved by EPA. This meeting, if approved by EPA, may occur either prior to or after the 30 day period. The request, however, must be made within the 30 day period.

(iii) The Permittee shall submit a revised RFI Workplan to EPA within sixty (60) calendar days of the date of EPA's written deficiency comments, if no meeting is held pursuant to subparagraph (ii) immediately above, or if such a meeting is held, within sixty (60) calendar days after the meeting, unless, in either case, extended by EPA.

2. RFI Workplan Implementation.

No later than sixty (60) calendar days after written notification by EPA approving the RFI Workplan, the Permittee shall begin implementation of the RFI according to the schedules specified in the RFI Workplan. The RFI shall be conducted in accordance with the approved RFI Workplan.

3. RFI Final Report and Summary Report

(a) Within sixty (60) calendar days of receipt by the Permittee of validated analytical data generated under any approved RFI Workplan, the Permittee shall submit to EPA an RFI Final Report and Summary Report, pursuant to Task VII of the Scope of Work for RFIs set forth in Attachment L of this Permit. The RFI Final Report(s) must contain adequate information to support further corrective action decisions at the Facility, should such actions be necessary. The RFI Final Report(s) shall describe the procedures, methods, and results of all Facility investigations of the subject SWMUs and any releases therefrom, including information on the type and extent of contamination, sources and migration pathways, and actual or potential receptors. It shall also present all information gathered under the approved RFI Workplan and include a comparison of media specific hazardous constituents with their corresponding health based levels. The RFI Summary Report(s) shall describe more briefly the investigations carried out, findings and all recommendations given in the RFI.

(b) Following submission of the Reports set forth in subparagraph 3(a) immediately above, subsequent activities for the Reports shall proceed in accordance with the following schedule:

(i) EPA shall review the Reports and either approve them or issue written deficiency comments.

(ii) A meeting between the Permittee and EPA to discuss the latter's deficiency comments, if desired by the Permittee, must be requested by the Permittee within thirty (30) calendar days of the date of EPA's written deficiency comments, and approved by EPA. This meeting, if approved by EPA, may occur either prior to or after the 30 day period. The request, however, must be made within the 30 day period.

(iii) The Permittee shall submit revised Reports to EPA within forty-five (45) calendar days of the date of EPA's written deficiency comments, if no meeting is held pursuant to subparagraph (ii) immediately above, or if such a meeting is held, within forty-five (45) calendar days after the meeting, unless, in either case, extended by EPA.

(c) After EPA approves the RFI Final Report and Summary Report, the Permittee shall mail the approved Summary Report to all individuals on the Facility mailing list established pursuant to 40 C.F.R. § 124.10(c)(1), within thirty (30) calendar days of receipt of approval.

(d) A report summarizing the testing program required by Task VI of the Scope of Work for RFIs set forth in Attachment L of this Module shall be submitted, as a separate document, at the same time as the RFI Final Report.

4. CMS Workplan

(a) The Permittee shall submit a CMS Workplan:

Within ninety (90) calendar days after the date of written notification from EPA that a CMS is required for any SWMU or AOC. Should a CMS be required for any SWMUs or AOCs, EPA's notification shall identify the hazardous constituent(s) which have exceeded health based levels as well as those which have been determined to threaten human health and the environment given site specific exposure conditions or due to additive exposure risk.

(b) EPA may require a CMS for any SWMU or AOC under the following conditions:

(i) If the concentrations of hazardous constituents in groundwater, surface water/sediment, soil, or air exceed their corresponding individual health based levels;

(ii) If the concentrations of hazardous constituents in groundwater, surface water/sediment, soil, or air do not exceed their corresponding individual health based levels, but additive exposure risk due to the presence of multiple constituents is not protective of human health; or

(iii) If the concentrations of hazardous constituents in groundwater, surface water/sediment, soil, or air do not exceed health based levels, but, based on EPA's determination, still pose a threat to human health or the environment, given site-specific exposure conditions.

(c) The CMS Workplan must address, at a minimum, all activities associated with completion of Tasks II and III set forth in Attachment M of this Permit. However, certain items required under the Scope of Work for a Corrective Measure Study (CMS) given in the Appendix to Attachment M may be omitted, subject to EPA's approval, if these items are deemed unnecessary or unwarranted, or have already been covered by prior RFI or CMS submissions to EPA. The CMS Workplan shall include:

(i) A description of the general approach to investigating and evaluating potential corrective measures;

(ii) A definition of the overall objectives of the study;

(iii) The specific plans for evaluating corrective measures to ensure compliance with corrective measure standards;

(iv) The schedule for conducting the study; and

(v) The format for the presentation of information.

(d) Following submission of the CMS Workplan set forth in (c) immediately above, subsequent activities for the Plan shall proceed in accordance with the following schedule:

(i) EPA shall review the CMS Workplan and either approve it or issue written deficiency comments.

(ii) A meeting between the Permittee and EPA to discuss the latter's deficiency comments, if desired by the Permittee, must be requested by the Permittee within thirty (30) calendar days of the date of EPA's written deficiency comments, and approved by EPA. This meeting, if approved by EPA, may occur either prior to or after the 30 day period. The request, however, must be made within the 30 day period.

(iii) The Permittee shall submit a revised CMS Workplan to EPA within forty-five (45) calendar days of the date of EPA's written deficiency comments, if no meeting is held pursuant to subparagraph (ii) immediately above, or if such a meeting is held, within forty-five (45) calendar days after the meeting, unless, in either case, extended by EPA.

(e) Subject to EPA approval, the CMS will be considered complete upon completion of Tasks I through IV set forth in Attachment M of this Permit. Certain items required by Attachment M may be omitted, subject to EPA's approval, if these items are deemed unnecessary or unwarranted, or have already been covered by prior RFI or CMS submissions to EPA.

5. CMS Implementation

No later than sixty (60) calendar days after the Permittee has received written approval from EPA for the CMS Workplan, the Permittee shall begin to implement the CMS according to the schedules specified in the CMS Workplan. The CMS shall be conducted in accordance with the approved Workplan submitted pursuant to Section D.4 of this Module.

6. CMS Final Report

(a) Within forty-five (45) calendar days after the completion of the CMS, the Permittee shall submit a draft CMS Final Report. The draft CMS Final Report shall:

(i) Summarize the results of the investigations and, if applicable, of any bench-scale or pilot tests conducted;

(ii) Provide a detailed description of the corrective measures evaluated and include an evaluation of how each corrective measure alternative meets the standards set forth in Section D.7(a) of this Module;

(iii) Present all information gathered under the approved CMS Workplan; and

(iv) Provide any additional information to assist EPA in the corrective measure selection addressed under Section D.8 of this Module.

(b) The draft CMS Final Report must address, at a minimum, all items necessary to demonstrate completion of Tasks II and III required by the CMS Scope of Work included in Attachment M to this Permit.

(c) Following submission of the draft CMS Final Report, EPA's review and approval shall proceed in accordance with the following schedule:

(i) EPA will review the Report, and either approve it, or issue written deficiency comments.

(ii) A meeting between the Permittee and EPA to discuss the latter's deficiency comments, if desired by the Permittee, must be requested by the Permittee within thirty (30) calendar days of the date of EPA's written deficiency comments, and approved by EPA. This meeting, if approved by EPA, may occur either prior to or after the 30 day period. The request, however, must be made within the 30 day period.

(iii) The Permittee shall submit a revised Report to EPA within sixty (60) calendar days of the date of EPA's written deficiency comments, if no meeting is held pursuant to subparagraph (ii) immediately above, or if such a meeting is held, within sixty (60) calendar days after the meeting, unless, in either case, extended by EPA.

(d) Based on preliminary results and the EPA approved CMS Final Report, EPA may require the Permittee to evaluate additional corrective measures or particular elements of one or more corrective measures.

7. Corrective Measures Selection

(a) Based on the results of any reports submitted pursuant to this Module, and any further evaluations of additional corrective measures, EPA shall select, subject to public notice and comments, corrective measures that will, at a minimum:

(i) Be protective of human health and the environment;

(ii) Meet the concentration levels determined to be protective of human health and the environment for hazardous constituents in each medium, in compliance with Section D.4(a);

(iii) Control the source(s) of release(s) so as to reduce or eliminate, to the maximum extent practicable, further releases of hazardous waste, including hazardous constituents, that might pose a threat to human health and the environment; and

(iv) Meet all applicable waste management requirements.

(b) In selecting the corrective measure(s) which meet the standards for remedies established under Section D.7(a) of this Module, EPA shall consider the following evaluation factors, as appropriate:

(i) Long-term reliability and effectiveness. Any potential corrective measure may be assessed for the long-term reliability and effectiveness it affords, along with the degree of certainty that the corrective measure will prove successful. Factors that shall be considered in this evaluation include:

(1) The magnitude of residual risks in terms of amounts and concentrations of hazardous waste, including hazardous constituents, that remain after implementation of a corrective measure, considering the persistence, toxicity, mobility and potential to bioaccumulate of such hazardous wastes or constituents;

(2) The type and degree of long-term management required, including monitoring, operation and maintenance;

(3) The potential for exposure of humans and environmental receptors to remaining hazardous wastes, including hazardous constituents, considering the potential threat to human health and the environment associated with excavation, transportation, redisposal or containment;

(4) The long-term reliability of the engineering and institutional controls, including uncertainties associated with land disposal of untreated hazardous wastes, including hazardous constituents, and residuals; and

(5) The potential need for replacement of the corrective measure.

(ii) Reduction of toxicity, mobility and volume. Any potential remedy may be assessed as to the degree to which it employs treatment that reduces toxicity, mobility or volume of hazardous wastes and/or hazardous constituents. Factors that shall be considered in such assessments include:

(1) The treatment processes that the corrective measure employs and the materials it would treat;

(2) The amount of hazardous wastes, including hazardous constituents, that would be destroyed or treated;

(3) The degree to which the treatment is irreversible;

(4) The residuals that will remain following treatment, considering the persistence, toxicity, mobility and propensity to bioaccumulate of such hazardous wastes, including hazardous constituents; and

(5) All concentration levels of hazardous wastes, or hazardous constituents in each medium that any corrective measure must achieve to be protective of human health and the environment.

(iii) The short-term effectiveness of any potential corrective measure may be assessed by considering the following:

(1) The magnitude of the reduction of existing risks;

(2) The short-term risks that might be posed to the community, workers, or the environment during implementation of such a corrective measure, including potential threats to human health and the environment associated with excavation, transportation, and redisposal or containment; and

(3) The time until full protection is achieved.

(iv) Implementability. The ease or difficulty of implementing any potential corrective measure may be assessed by considering the following factors:

(1) The degree of difficulty associated with constructing the technology;

(2) The expected operational reliability of the technologies;

(3) The need to coordinate with and obtain necessary approvals and permits from other agencies;
(4) The availability of necessary equipment and specialists;

(5) The available capacity and location of needed treatment, storage, and disposal services; and

(6) The requirements for removal, decontamination, closure, or post-closure of units, equipment, devices or structures that will be used to implement the corrective measure.

(v) Cost. The types of costs that may be assessed include the following:

(1) Capital costs;

(2) Operational and maintenance costs;

(3) Net present value of capital, and operation and maintenance; and

(4) Potential future corrective action costs.

8. Permit Modification for CMI

(a) Upon the selection of any corrective measure for SWMUs or AOCs or other areas for which corrective measures are not established by this Module, or for any SWMUs or AOCs which receive an NFA determination pursuant to this Module, but where additional information has indicated that specific corrective measures are required, EPA will initiate a modification to this Permit, pursuant to 40 C.F.R. § 270.41. The modification will specify all selected corrective measures and include, at a minimum, the following:

(i) A description of all technical features of any corrective measure that is necessary for achieving the standards for corrective measures established under Section D.7(a) of this Module, including length of time for which compliance must be demonstrated at specified points of compliance;
(ii) All concentration levels of hazardous constituents in each medium, selected by EPA, that any corrective measure must achieve to be protective of human health and the environment;
(iii) All requirements for achieving compliance with these concentration levels;
(iv) All requirements for complying with the standards for management of wastes;
(v) All requirements for removal, decontamination, closure, or post-closure of units, equipment, devices or structures that will be used to implement the corrective measure(s);
(vi) A schedule for initiating and completing all major technical features and milestones of the corrective measure(s); and
(vii) Requirements for submission of reports and other information.

9. Modification of the Corrective Action Schedule

(a) If at any time the Permittee determines that modification of the Compliance Schedule included in this Module to this Permit is necessary, the Permittee shall:

(i) Notify EPA in writing within fifteen (15) calendar days of such determination;

(ii) Provide an explanation why the Compliance Schedule cannot be met, and

(iii) Submit to EPA a modified Compliance Schedule

(b) EPA shall notify the Permittee in writing of the final decision regarding the Permittee's modification to the Compliance Schedule.

(c) Compliance Schedule modifications finalized by the Division Director according to this procedure shall not be subject to administrative appeal.

(d) Any modification to the Compliance Schedule pursuant to this procedure does not constitute a reissuance of this Permit.

(e) All other modifications to this Permit must be made in accordance with conditions in Module I of this Permit.

10. Amendment of Plans

If, at any time, the Division Director determines that the RCRA Facility Investigation (RFI), Corrective Measures Study (CMS), or Corrective Measures Implementation (CMI) Plan required under this Module or which have been previously submitted or performed, no longer satisfy the requirements of Section 3004 of RCRA, as amended, 40 C.F.R. § 264.101, and/or this Permit, for prior or continuing releases of hazardous waste and/or hazardous constituents from solid waste management units (SWMUs), the Permittee must submit amended plans to the Director within ninety (90) days of such determination.

11. Financial Assurance for Corrective Action

(a) The Permittee shall comply with the financial assurance requirements for corrective action set forth in 40 C.F.R.§ 264.101 and Section 3004 of RCRA. Within 90 days of the selection of a corrective measure, unless otherwise directed by EPA, Permittee shall i) establish financial assurance for corrective action activities required by this Permit and ii) submit to the Division Director an updated cost estimate for all such corrective action activities and a demonstration that financial assurance of an amount no less than such cost estimate has been established. Financial assurance mechanisms which Permittee may use are:

- a surety bond unconditionally guaranteeing performance of the corrective action activities required under this Permit or payment at the direction of EPA of such performance costs into a standby trust fund for the benefit of EPA;

- one or more irrevocable letters of credit, payable at the direction of EPA, into a standby trust fund for the benefit of EPA;

- a trust fund for the benefit of EPA;

- a written corporate guarantee, by an entity that demonstrates to EPA's satisfaction that it meets the financial test set forth in 40 C.F.R. § 264.143(f), to perform the corrective action activities required by this Permit or establish a trust fund for the benefit of EPA; or

- an insurance policy by a licensed carrier where the insurer shall make payments as EPA directs in writing to, (1) to reimburse the Permittee for expenditures made by the Permittee for the correction action activities; or (2) to pay any other person or entity, including EPA, whom EPA has determined has performed or will perform the corrective action activities required under this Permit. The insurance policy must increase annually to cover inflation. The policy must stipulate that the insurer may not cancel, terminate, or fail to renew the policy, unless the Permittee fails to pay the premium, and then only after 120 day prior written notice sent to the Director by certified mail.

The Permittee should refer to Subpart H 40 C.F.R. Part 264 for guidance regarding the acceptable use of the above mechanisms. EPA reserves the right to require modification of the financial assurance instrument(s) submitted (including updated demonstrations submitted pursuant to Paragraph D.11.(b) below) if EPA finds that Permittee's mechanism(s) does not assure adequate funding or that such funds will not be accessible to EPA, Permittee or other entity selected by EPA, to complete the corrective action activities deemed necessary and appropriate by EPA. Such instruments shall remain in force until EPA releases Permittee from the financial assurance obligation in writing, subject to EPA's approval of the completion of the corrective action activity(ies).

(b) Cost estimates and financial assurance demonstrations shall be updated as necessary and submitted to EPA as appropriate. At a minimum, the Permittee shall update the cost estimate and the financial assurance demonstration when requested by EPA, upon the conclusion of the CMS, whenever or selected corrective action plans are modified, or other available information indicates that there may be an increase in the anticipated costs.

E. NEWLY IDENTIFIED SWMUs AOCs OR RELEASES

(a) The Permittee shall notify the Regional Administrator in writing, of any newly identified SWMUs, AOCs or releases within 15 days of discovery. The notification shall include a description of the newly discovered SWMU, AOC or release and a figure depicting its location.

(b) The Permittee shall investigate and implement corrective measures for newly identified SWMUs, AOCs and/or releases under the New Jersey site remediation program as administered by the NJDEP. The investigation and corrective measures being done for these newly identified SWMUs, AOCs or releases should to the extent practicable, include relevant components of a RCRA Facility Investigation, Corrective Measures Study and Corrective Measures Implementation under NJDEP regulatory oversight. EPA will record its approvals of documentation concerning the cleanup(s).

LIST OF ABBREVIATIONS

AOC	Area of Concern
ASARCO	American Smelting and Refining Company
bgs	Below Ground Surface
BTEX	Benzene, Toluene, Ethylbenzene, and Xylene
°C	Degrees Celsius
CA	Chloroethane
CAMU	Corrective Action Management Unit
CEA	Classification Exception Area
CFR	Code of Federal Regulations
cm/s	Centimeters per Second
CM	Corrective Measure
CMS	Corrective Measures Study

COC	Contaminant of Concern
CSIA	Compound Specific Isotope Analysis
CVOC	Chlorinated Volatile Organic Compound
CY	Central Yard
cu yd	Cubic Yard
DAF	Dilution Attenuation Factor
DCA	Dichloroethane
DCE	Dichloroethylene
DNAPL	Dense Non-Aqueous Phase Liquid
DO	Dissolved Oxygen
DOCC	Description of Current Conditions
DPT	Direct Push Technology
DTW	Depth to Water
EAB	Enhanced Aerobic Bioremediation
EDTA	Ethylenediaminetetraacetic Acid
EIB	Enhanced In-situ Bioremediation
EY	East Yard
°F	Degrees Fahrenheit
FS	Feasibility Study
FR	Fenton's Reagent
GC	Gas Chromatograph
GIS	Geographical Information System
GPS	Global Positioning System
gpm	Gallons Per Minute
GWQS	Groundwater Quality Standard
HDPE	High Density Polyethylene
HFO	Hydrous Ferric Oxide
HSWA	Hazardous and Solid Waste Amendments of 1984
IRM	Interim Remedial Measure
ISCO	In-Situ Chemical Oxidation
LDR	Land Disposal Restriction
LEL	Lower Exposure Limit
LNAPL	Light Non Aqueous Phase Liquid
LRM	LNAPL Removal Measure
LTTD	Low Temperature Thermal Desorption

MDL	Method Detection Limit
mg/kg	Milligrams per Kilogram (ppm)
MNA	Monitored Natural Attenuation
MPE	Measuring Point Elevation
MPE	Multiphase Extraction
MTBE	Methyl Tertiary-Butyl Ether
mv	Millivolts
MY	Main Yard
NA	Not Applicable
NAA	No Action Alternative
NAPL	Non Aqueous Phase Liquid
NCP	National Contingency Plan
NF	North Field
NF/MY	North Field/Main Yard
NFA	No Further Action
NFE	North Field Extension
NGVD	National Geodetic Vertical Datum
NJDEP	New Jersey Department of Environmental Protection
NPT	National Pipe Thread
NRDCSCC	Non-Residential Direct Contact Soil Cleanup Criteria
NRDCSCS	Non-Residential Direct Contact Soil Cleanup Standard
O&M	Operation and Maintenance
ORC	Oxygen Releasing Compound
ORP	Oxidation/Reduction Potential
OVM	Organic Vapor Monitor
PAH	Polycyclic Aromatic Hydrocarbon
PCE	Perchloroethylene
PCOC	Principal Contaminant of Concern
PDI	Pre-Design Investigation
PID	Photo Ionization Detector
POTW	Publicly Owned Treatment Works
ppb	Parts Per Billion
PPE	Personal Protective Equipment
ppm	Parts Per Million
PQL	Practical Quantitation Level
psig	Pounds per Square Inch Gauge
PVC	Poly-Vinyl Chloride
QA/QC	Quality Assurance/Quality Control

RAO	Remedial Action Objective
RCRA	Resource Conservation Recovery Act of 1976
RFI	RCRA Facility Investigation
SCC	Soil Cleanup Criteria
scfm	Standard Cubic Feet per Minute
SMS	Stabilization Measures Status
SOD	Soil Oxidant Demand
SP	Sparge Point
SRFI	Supplemental RFI
S/S	Solidification and Stabilization
SVOC	Semi-Volatile Organic Compound
SWMU	Soil Waste Management Unit
TAL	Target Analyte List
TCA	Trichloroethane
TCE	Trichloroethylene
TCL	Target Constituent List
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total Dissolved Solids
TDU	Thermal Desorption Unit
TEL	Tetra-Ethyl Lead
TIC	Tentatively Identified Compound
TOC	Total Organic Compound
TOL	Total Organic Lead
TOS	Top of Screen
TPH	Total Petroleum Hydrocarbons
TSP	Tri-Sodium Phosphate
TVOC	Total Volatile Organic Compounds
UCS	Unconfined Compressive Strength
ug/L	Micrograms per Liter (ppb)
USCS	Unified Soil Classification System
UTS	Universal Treatment Standards
VC	Vinyl Chloride
VOC	Volatile Organic Compound
WQIP	Water Quality Indicator Parameters

MODULE IV - LAND DISPOSAL RESTRICTIONS (LDR)

A. BACKGROUND. The Resource Conservation and Recovery Act of 1976 (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA), prohibits the continued land disposal of untreated hazardous wastes beyond specified dates, "unless the Administrator determines that the prohibition is not required in order to protect human health and the environment for as long as the wastes remain hazardous..." RCRA §§ 3004(d)(1) and (e)(1). See also § 3004(g)(5), 42 U.S.C. §§ 6924(d)(1) and (e)(1). See also 42 U.S.C. § 6924(g)(5)).

B. WASTE ANALYSIS.

1. Pursuant to 40 C.F.R. § 264.13(a)(1), before the Permittee treats, stores, or disposes of any hazardous waste, the Permittee must obtain a detailed chemical and physical analysis of a representative sample of the waste. At a minimum, this analysis must contain all the information which must be known to treat, store or dispose of the waste in accordance with the requirements of 40 C.F.R. Parts 264 and 268 or with the conditions of this Permit.

2. The Permittee shall comply with the waste analysis, notification, certification, and record keeping requirements of 40 C.F.R. § 268.7 whenever generating, treating, or managing a waste, which within the meaning of 40 C.F.R. Part 268, is a land disposal restricted waste ("LDR waste").

3. If the Permittee determines whether a waste is a LDR waste based solely on his knowledge of the waste, all supporting data used to make this determination must be maintained on-site in the Facility's operating record. (40 C.F.R. § 264.73).

C. STORAGE OF LDR WASTES. The Permittee may store LDR wastes in accordance with the conditions specified in 40 C.F.R.§ 268.50(a), for up to one year unless EPA can demonstrate that such storage was not solely for the purpose of accumulation of such quantities of hazardous waste as are necessary to facilitate proper recovery, treatment, or disposal. (40 C.F.R. § 268.50(b)).

The Permittee may store LDR wastes beyond one year; however, the Permittee bears the burden of proving that such storage was solely for the purpose of accumulation of such quantities of LDR waste as are necessary to facilitate proper recovery, treatment, or disposal. (40 C.F.R. § 268.50(c)).

D. LAND TREATMENT OR DISPOSAL OF RESTRICTED WASTES. The land treatment or land disposal of LDR waste at the Facility is prohibited unless the relevant waste is pretreated to below the applicable treatment standards prescribed by 40 C.F.R. Part 268, Subpart D including, but not limited to 40 C.F.R. §268.40 and 40 C.F.R. §268.48, or the waste is exempt under 40 C.F.R. § 268.1(c).

MODULE V - WASTE MINIMIZATION

A. SUBMITTAL REQUIREMENTS.

Pursuant to this Module, the Permittee must submit:

1) waste minimization certification(s).

2) hazardous waste reduction plan(s).

3) information regarding "green remediation" and EPA "Clean and Green Policy" as related to the Permittee's corrective action activities.

B. WASTE MINIMIZATION CERTIFICATION.

Pursuant to Section 3005(h) of RCRA, 42 U.S.C. § 6925(h), and 40 C.F.R. § 264.73(b)(9), the Permittee must certify that:

(1) A program is in place to reduce the volume and toxicity of hazardous waste generated to the degree determined by the Permittee to be economically practicable; and

(2) The proposed method of treatment, storage or disposal is that practicable method currently available to the Permittee which minimizes the present and future threat to human health and the environment.

Certifications must be submitted annually. The first certification will be due no later than July 1of the year following the effective date of this Permit, or by a different date approved in writing by EPA.

C. HAZARDOUS WASTE REDUCTION PLAN (HWRP).

The Permittee shall submit a HWRP by July 1 of the first year following the effective date of this Permit. The HWRP shall be updated at least biennially to reflect any changes in the HWRP, and submitted by July 1 of that year. The HWRP shall include, at a minimum, the following information:

(1) Identify amounts and types of all acute hazardous waste generated by waste stream;

(2) Identify amounts and types of non-acute hazardous waste by waste stream for streams greater than five (5) tons;

(3) Identify at least 90% of all non-acute hazardous waste generated at the Facility;

(4) Describe the source of generation and waste management method for each waste stream;

(5) Provide a list of technically feasible and economically practicable waste reduction measures; and

(6) Provide a program plan and schedule for implementing technically feasible and economically practicable waste reduction.

The following guidance documents should be used in developing the HWRP:

(1) Waste Minimization Opportunity Assessment Manual,
EPA/625/7-88/003, July 1988 or as amended.
Available at NTIS, 5285 Port Royal Road, Springfield, VA 22161, tel. 1-800-553-6847. The EPA Manual for Waste Minimization Opportunities can also be downloaded from the following website:
http://es.epa.gov/techinfo/facts/epa/wastemin.html

(2) Region 2 HWRP Requirements. (A check list).
Available through EPA Region 2, Hazardous Waste Programs Branch, Adolph Everett, Chief, tel. (212) 637-4109.

The following documents may serve as helpful reference documents:

(1) New York State Waste Reduction Guidance Manual,
March 1989 or as amended.

(2) New York State Waste Reduction Guidance Manual Supplement, December 1990. Available through the New York State Department of Environmental Conservation, Bureau of Pollution Prevention, 625 Broadway, Albany, New York 12233-1750, tel. 518/402-9469.

(3) Additional Optional Guidance can be downloaded from the following website:
http://www.state.nj.us/dep/opppc/rules/guide.pdf

D. IMPLEMENTATION OF WASTE REDUCTION TECHNIQUES.

The Permittee shall implement the feasible waste reduction techniques in accordance with the schedule in the HWRP.

E. ENVIRONMENTAL MANAGEMENT SYSTEM (EMS).

As an alternative to Waste Minimization reporting the Permittee may submit to EPA a written request to perform and implement an Environmental Management System (EMS) to satisfy waste minimization requirements. As part of its request, the Permittee must include a report on EMS planning and development (hereinafter referred to as "EMS Report") which shall contain information equivalent to that required in the HWRP. EPA's written approval of this EMS alternative will be based on whether:

(1) the Permittee demonstrates to EPA that an acceptable EMS is in place at the Facility;

(2) the Permittee's EMS Report provides equivalent information as that which is required for a HWRP submittal;

(3) the Permittee's EMS Report provides information on the implementation of feasible waste reduction techniques at the Facility;

If approved, the Permittee will remain subject to the requirement for annual certification. The annual certification is due on July 1 of the year following the effective date of this Permit, or by another date approved in writing by EPA.

If the EMS standards are not met, or the Permittee later decides that it will no longer implement an EMS at the Facility, or does not submit an EMS Report as described above, the Permittee will remain subject to the waste minimization requirements of this Module.

Information on EMS planning and implementation is available on the following websites:
http://www.epa.gov/region02/ems/
http://www.epa.gov/region02/ems/resources.htm
http://www.epa.gov/ems/index.html
http://www.peercenter.net/taps/index.cfm

F. GREEN REMEDIATION AND EPA REGION 2 CLEAN AND GREEN POLICY.

As part of corrective action deliverables required under Module III. of this Permit, including but not limited to the Corrective Measures Implementation Workplan (CMIWP) for the construction of the Corrective Action Management Unit (CAMU), the Permittee shall also describe how its operations, where appropriate, comport with principles and practices of "Green Remediation" as outlined the EPA Region 2 "Clean and Green Policy."

Information on the Green Remediation and the EPA Region 2 Clean and Green Policy is available on the following websites:
http://www.epa.gov/region02/superfund/green_remediation/policy.html
http://www.epa.gov/oswer/greenercleanups/principles.html

MODULE VI- ORGANIC AIR EMISSION STANDARDS

A. SUBPART AA - ORGANIC AIR EMISSION STANDARDS FOR PROCESS VENTS

Applicability: 40 C.F.R. Part 264, Subpart AA (Air Emission Standards for Process Vents) applies to facilities that treat, store or dispose of hazardous waste and sets forth standards for emissions from process vents associated with distillation, fractionation thin-film evaporation, solvent extraction or air or steam stripping operations that manage hazardous wastes of at least 10 ppmw. 40 C.F.R. § 264.1030.

Permittee shall comply with the requirements set forth in 40 C.F.R. Part 264, Subpart AA to the extent applicable.

B. SUBPART BB-ORGANIC AIR EMISSION STANDARDS FOR EQUIPMENT LEAKS

1. Applicability: 40 C.F.R. Part 264, Subpart BB applies to facilities that treat, store or dispose of hazardous wastes.

2. Equipment Subject to Subpart BB Standards

The standards set forth in 40 C.F.R. Part 264, Subpart BB apply to each piece of equipment that contains or contacts hazardous waste with organic concentrations of at least 10 percent by weight in certain units. 40 C.F.R. § 264.1050. Permittee shall comply with all applicable provisions of Subpart BB set forth in 40 C.F.R. § 264.1052-264.1065.

The above provisions apply, at a minimum, to the equipment identified in the operating records at Permittee's facility. Each piece of equipment to which Subpart BB applies shall be marked in such a manner that it can be distinguished readily from other pieces of equipment.

3 Waste Determination Procedures

The Permittee shall comply with Waste Determination Procedures in accordance with 40 C.F.R. § 264.1063, as applicable. In accordance with the Waste Analysis Plan (40 C.F.R. § 264.13(b)), the Permittee shall determine, for each piece of equipment, whether the equipment contains or contacts a hazardous waste with organic concentration that equals or exceeds 10 percent by weight using the following:

a) Analytical methods described in ASTM Methods D 2267-88, E 169-87, E 16888, E 260-85;

b) Methods 9060 or 8260 of SW-846; or

c) Application of the knowledge of the nature of the hazardous waste stream or the process by which it was produced. This must include documentation of waste determination by knowledge.

The Permittee shall comply with the following waste characterization procedures:

a) Samples used in determining the percent organic content shall be representative of the highest total organic content hazardous waste that is expected to be in contact with the equipment;

b) To determine if pumps or valves are in light liquid service, the vapor pressures of constituents shall be obtained from standard reference texts or shall be determined by ASTM D-2879-86; and,

c) Performance tests to determine if a control device achieves 95 weight percent organic emission reductions shall comply with the procedures of 40 C.F.R. § 264.1034(c)(1) through (c)(4).

4. Operating Requirements

Permittee shall comply with all applicable operating requirements set forth in 40 C.F.R. Part 264, Subpart BB. These, at a minimum include:

a) Pumps in Light Liquid Service: These pumps shall be operated in accordance with 40 C.F.R. § 264.1052 requirements.

b) Sampling Connection System: These systems shall be operated in accordance with 40 C.F.R. § 264.1055 requirements.

c) Open-ended Valves or Lines: all valves or lines shall be operated in accordance with 40 C.F.R. § 264.1056 requirements.

d) Valves in Gas/Vapor Service or in Light Liquid Service: All valves shall be operated in accordance with 40 C.F.R. § 264.1057 requirements.

e) Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid Service, and Flanges and other Connectors: These devices shall be operated in accordance with 40 C.F.R. § 264.1058 requirements.

5. Inspection and Monitoring Requirements

The Permittee shall comply with Inspection and Monitoring Requirements in accordance with 40 C.F.R. § 264.1052-1062 where required when applicable. The inspection and monitoring requirements for the units subject to Subpart BB include but are not limited to:

a) Pumps in Light Liquid Service: These pumps shall be monitored in conformance with 40 C.F.R. § 264.1052. The Permittee must monitor such pumps on a monthly basis to detect leaks by the Reference Method 21 in 40 C.F.R. § 60. In addition these pumps shall be checked by visual inspection each calendar week for indication of liquids dripping from the pump seal. When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after it is detected, except as provided in 40 C.F.R. § 264.1059.

b) Valves in Gas/Vapor Service or in Light Liquid Service: All the valves shall be monitored in conformance with 40 C.F.R. § 264.1057. The Permittee must monitor such valves monthly to detect leaks using Reference Method 21 in 40 C.F.R. Part 60. Any valve for which a leak is not detected for two successive months shall be monitored the first month of every succeeding quarter beginning with the next quarter, until a leak is detected. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for two successive months. When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in 40 C.F.R. § 264.1059.

(c) Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid Service, and Flanges and other Connectors: These devices must be monitored in accordance with 40 C.F.R. § 264.1058. These devices shall be monitored within 5 days by Reference Method 21 in 40 C.F.R. Part 60 if evidence of a potential leak is found by visual, audible, olfactory or any other detection method. When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after it is detected, except as provided in 40 C.F.R. § 264.1059.

6. Recordkeeping and Reporting Requirements

The Permittee shall comply with Recordkeeping and Reporting requirements in accordance with 40 C.F.R. § 264.1064 and 40 C.F.R. § 264.1065, as applicable.

C. SUBPART CC - ORGANIC AIR EMISSION STANDARDS FOR TANKS, SURFACE IMPOUNDMENTS AND CONTAINERS

1. Applicability

40 C.F.R. Part 264, Subpart CC applies to facilities that treat, store or dispose of hazardous waste in tanks, surface impoundments or containers subject to either Subparts I, J or K of 40 C.F.R. Part 264. 40 C.F.R. § 264.1080. The Permittee shall comply with all standards for units subject to Subpart CC (40 C.F.R. §§ 264.1080- 264.1090).

2. Applicable Units Subject to Subpart CC Standards

Each piece of equipment to which the Subpart CC applies shall be marked in such a manner that it can be distinguished readily from other pieces of equipment.

3. Design Requirements for Tanks and Containers:

The Permittee shall comply with all applicable design requirements for tanks set forth in 40 C.F.R. § 264.1082 and § 264.1084. These at a minimum include the following:

Level 1 tanks shall be equipped with a fixed roof designed to meet the following requirements:

(a) The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the hazardous waste in the tank. The fixed roof may be a separate cover installed on the tank or may be an integral part of the tank structural design.

(b) The fixed roof shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between roof section joints or between the interface of the roof edge and the tank wall.

(c) Each opening in the fixed roof and any manifold system associated with the fixed roof shall be either:

(d) equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the opening and the closure device; or

(e) connected by a closed-vent system that is vented to a control device, and the control device shall remove or destroy organics in the vent stream, and shall be operating whenever hazardous waste is managed in the tank.

Whenever a hazardous waste is in the tank, the fixed roof shall be installed with each closure device secured in the closed position except as follows:

(a) To provide access to the tank for performing routine inspection and maintenance.

(b) To remove accumulated sludge or other residues from the bottom of the tank.

(c) To open a conservation vent or other pressure relief device in accordance with 40 C.F.R. § 264.1084(c)(3)(ii).

The Level 2 tanks shall be covered with a fixed roof and vented directly through a closed-vent system to a control device with the following requirements:

(d) The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the liquid in the tank.

(e) Each opening in the fixed roof not vented to a control device shall be equipped with a closure device in accordance with 40 C.F.R. § 264.1084(g)(1)(ii).

Whenever a hazardous waste is in the tank, the fixed roof shall be installed with each closure device secured in the closed position and the vapor headspace underneath the fixed roof vented to the control device except as provided in 40 C.F.R. § 264.1084(g)(2).

The closed vent system and control device shall be designed in accordance with the requirements of 40 C.F.R. § 264.1087.

Any condenser system shall be designed, operated and maintained per manufacturer's specifications and shall achieve at least a 95% efficiency for the reduction of the total organic content of the inlet vapor stream.

The Permittee shall comply with all applicable design requirements for containers set forth in 40 C.F.R. §§ 264.1082 and 264.1086.

4. Waste Determination Procedures

The Permittee shall comply with Waste Determination Procedures in accordance with 40 C.F.R. § 264.1083, as applicable.

5. Operating Standards

As applicable, Permittee shall control air emissions in accordance with standards specified in 40 C.F.R. § 264.1082 (Standards: General); 40 C.F.R. § 264.1084 (Standard: Tanks); 40 C.F.R. § 264.1085 (Standards: Surface Impoundments); 40 C.F.R. § 264.1086 (Standards: Containers); and § 264.1087 (Standards: Closed-Vent Systems and Control Devices).

6. Inspection and Monitoring Requirements

The Permittee shall comply with Inspection and Monitoring Requirements set forth, or referenced in, 40 C.F.R. § 264.1088, including the following:

For tanks and associated control devices:

(a) The fixed roof and the closure devices shall be visually inspected annually by the Permittee to check for defects that could result in air pollutant emissions. 40 C.F.R. § 264.1084(c)(4).

(b) If any defect is detected in the fixed roof or closure device, the repairs shall commence within 5 days of detection and shall be completed not later than 45 days after detection, except as in accordance with 40 C.F.R. § 264.1084(k).

(c) The Permittee shall carry out daily inspections, continuous monitoring and corrective measures of the condenser control device for Level 2 tanks in accordance with 40 C.F.R. § 264.1087(c)(7).

(d) The Permittee shall carry out inspections, monitoring and repairs of the closed vent system in accordance with 40 C.F.R. § 264.1087(c)(7).

For containers:

(a) The Permittee shall visually inspect the container and its cover and closure devices initially and thereafter, at least once every 12 months, to check for visible cracks, holes, gaps or other spaces into the interior of the container when the cover and closure device are secured in the closed position. 40 C.F.R. § 264.1086.

(b) If a defect is detected for the container, cover or closure devices, the Permittee shall make first efforts at repair of the defect no later than 24 hours after detection and repair shall be competed as soon as possible but no later than 5 calendar days after detection. If repair of the defect cannot be completed within 5 calendar days, then the hazardous waste shall be removed from the container and the container shall not be used to manage hazardous waste until the defect is repaired.

7. Recordkeeping and Reporting Requirements

The Permittee shall comply with Recordkeeping Requirements in accordance with 40 C.F.R. § 264.1089. Records shall be maintained in the operating record for a minimum of three years in accordance with 40 C.F.R. § 264.1089(a). For tanks and associated control devices, the Permittee shall prepare and maintain records for the tank that include the following:

(a) Tank identification number.

(b) A record for each inspection that includes the following information:

(i) Date inspection was conducted.
(ii) For each defect detected during the inspection:
(iii) the location of the defect, a description of the defect, the date of detection, and
(iv) corrective action taken to repair the defect.

(c) Prepare and maintain records for each determination for the maximum organic vapor pressure of the hazardous waste tank which include:

(i) Date and time the samples were collected.
(ii) The analysis method used.
(iii) The analysis results.

For a closed-vent system and control device, the Permittee shall prepare and maintain records which include the following:

(a) Signed and dated certification for the operation and performance of the control device.
(b) Monitoring, operating and inspection information.
(c) Planned routine maintenance and the results of prior routine maintenance.
(d) The occurrence and duration of malfunctions of the control device system and the corrective actions taken.
(e) Compliance tests.
(f) Engineering design analysis or performance test results, as applicable.
(g) Operating characteristics, performance results, modifications and off- specification operating periods.

The Permittee shall adhere to reporting requirements as follows:

(a) The Permittee shall submit reports to the Division Director in accordance with 40 C.F.R. § 264.1090, as applicable, in the event of noncompliance.

(b) All reports shall be signed and dated by an authorized representative of the Permittee as per 40 C.F.R. § 270.11 (b).

(c) Any occurrence of noncompliance with specified requirements shall be reported to the Agency within 15 days by written a report.

8. Notification of Regulated Activity

The Permittee shall seek modification of this Permit in accordance with 40 C.F.R. § 270.42 for any waste management unit which becomes subject to 40 C.F.R. Part 264 Subparts AA, BB or CC after the effective date of this Permit. The Permittee shall submit the documentation specified in 40 C.F.R. §§ 270.24, 270.25 or 270.27, as applicable.